

LAVIO BARBOZA DE LIMA PL OP23-17-EST-05-R00-COBERTA..._PLT 08/05/2023 09:19:22

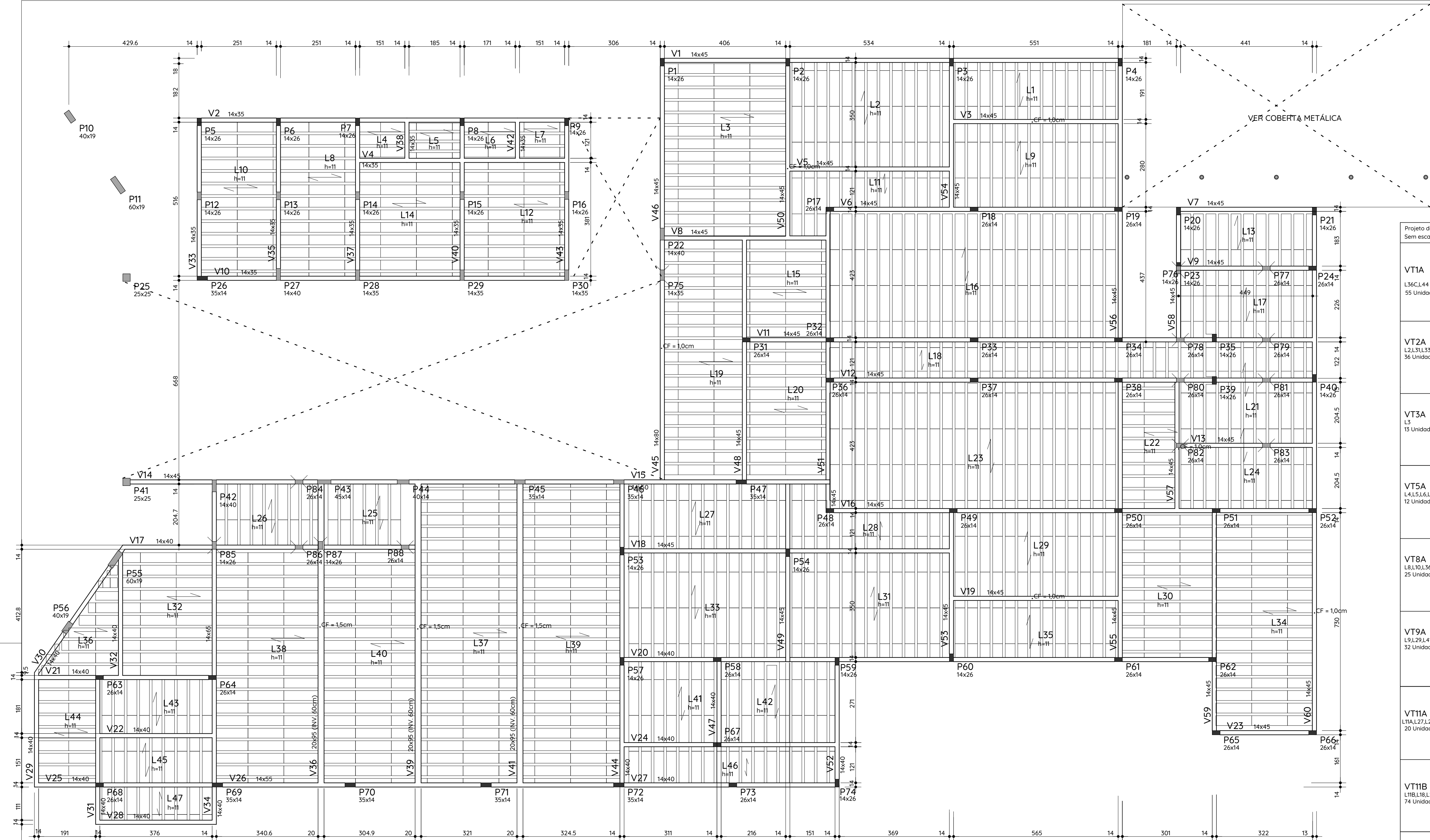
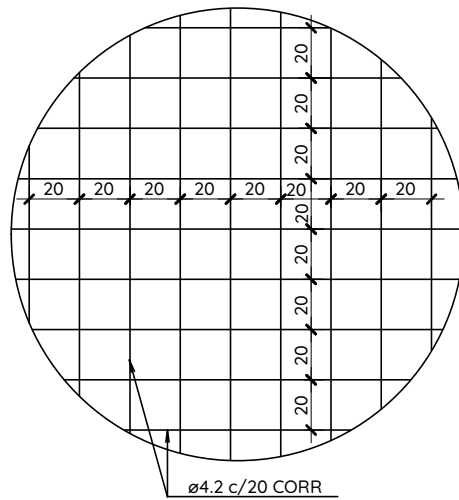


TABELA DE FERROS				
POS	BIT (mm)	QUANT	UNIT (cm)	TOTAL (cm)
ARMADURA DE DISTRIBUIÇÃO				
3	14,2	720	959	690480
RESUMO AÇO CA50-60				
(*) tabela sem perda de aço				
ACO	BIT (mm)	COMPR (m)	PESQ(*) (kg)	
60B	4,2	6905	753	
Peso Total		60B =	753 kgf	

Projeto de fabricação de vigotas treliçadas - LAJES DA COBERTA (NÍVEL 1)
Sem escala

VT1A L36C,L44 55 Unidades		VT17A L37,L33D 11 Unidades	
VT2A L2,L31,L33 36 Unidades		VT24A L21,L24,L25,L26 33 Unidades	
VT3A L3 13 Unidades		VT36A L36A 2 Unidades	
VT5A L4,L5,L6,L7 12 Unidades		VT40A L40,L30,L32 38 Unidades	
VT8A L8,L10,L36E 25 Unidades		VT43A L43 8 Unidades	
VT9A L9,L29,L41 32 Unidades		VT47A L47 8 Unidades	
VT11A L11A,L27,L28A,L36D 20 Unidades		VT36D L36B,L45 10 Unidades	
VT11B L11B,L12B,L38B,L46 74 Unidades		VT38A L38B,L12,L14 36 Unidades	
VT15A L15,L19,L20,L42 44 Unidades		VT39A L39,L34,L37 64 Unidades	
VT16A L16,L23 46 Unidades			

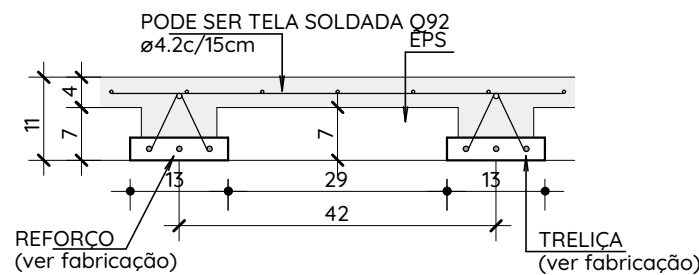
ARMADURA DE DISTRIBUIÇÃO



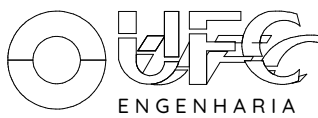
720 ø 4,2 C=959

PODE SUBSTITUIR POR TELA SOLDADA Q92

DETALHE LAJE LT-11



ESPECIFICAÇÃO DA ESTRUTURA	
CLASSE DE AGRESSIVIDADE	II
CONCRETO	C35 - fck=35MPa
FATOR AGUAMENTO	≤0,45
COBRIMENTOS	PILARES/VIGAS = 2,5cm LAJES = 2,0cm
CONTROLE RÍGIDO DE QUALIDADE E TOLERÂNCIA DE MEDIDAS	
LEGENDA DE PILARES	
NASCE	
PASSA	
MORRE	



ESTRUTURAL

FÓRUM DA COMARCA DE CORUIPE

FORMA E ARMAÇÃO LAJES COBERTA NÍVEL 1

ARMADURA DE DISTRIBUIÇÃO

PROJETADO: FELIPE LIMA

VERIFICADO: 04/05/2023

DESENHADO: F. LIMA

APROVADO: 04/05/2023

N.º U.F.C.

SUBSTITUIR A:

DESENHO: OP23-17-EST-05-R00-COBERTA

DATA: 04/05/2023

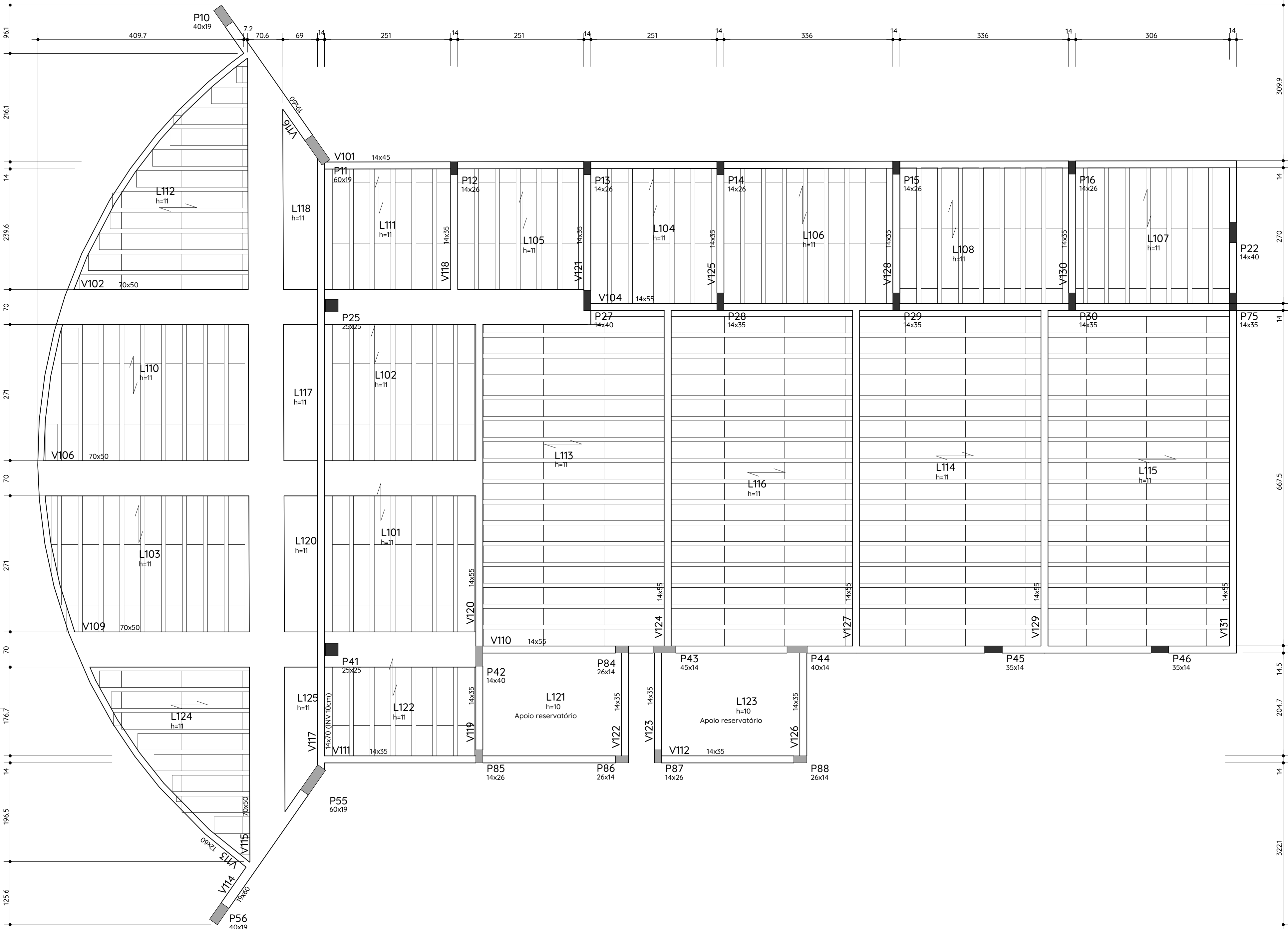
OBRA N.º: 0001

05

REV. N.º: 00

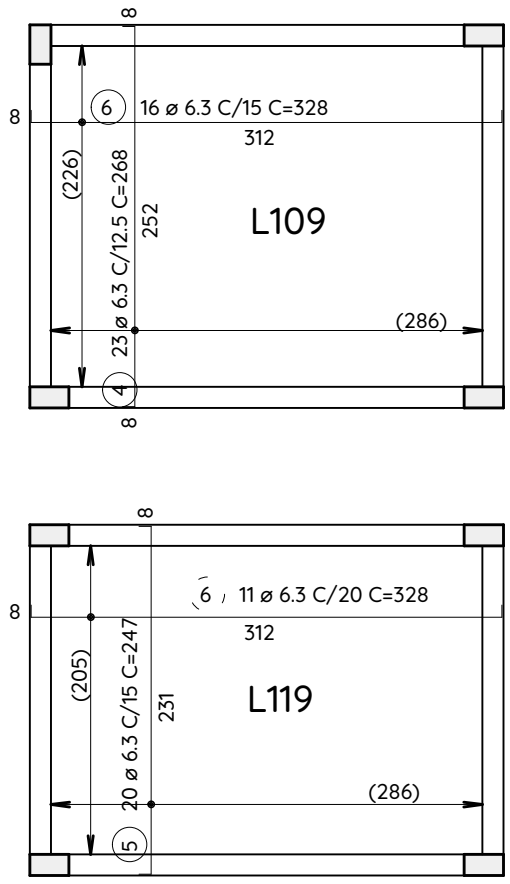
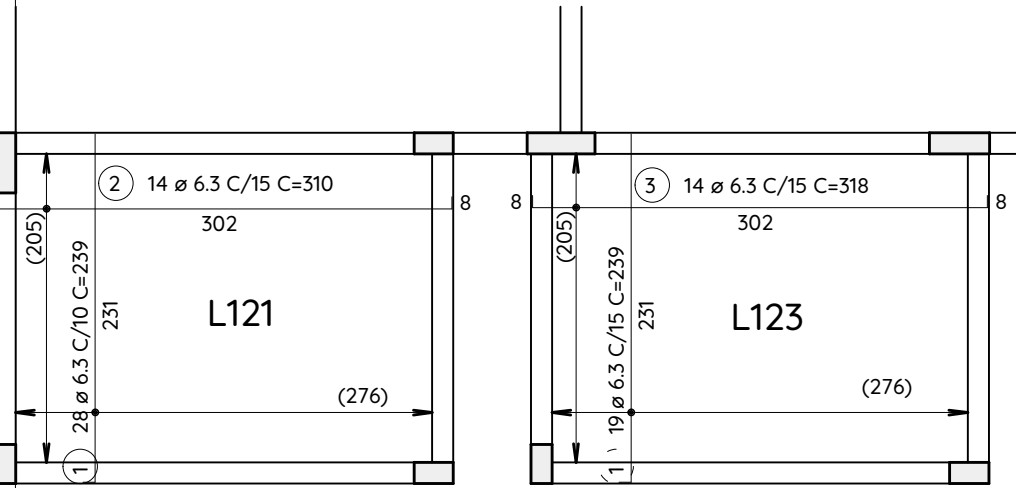
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LAVIO BARBOZA DE LIMA PL OP23-17-EST-06-R00-COBERTA..._PLT 08/05/2023 09:19:24

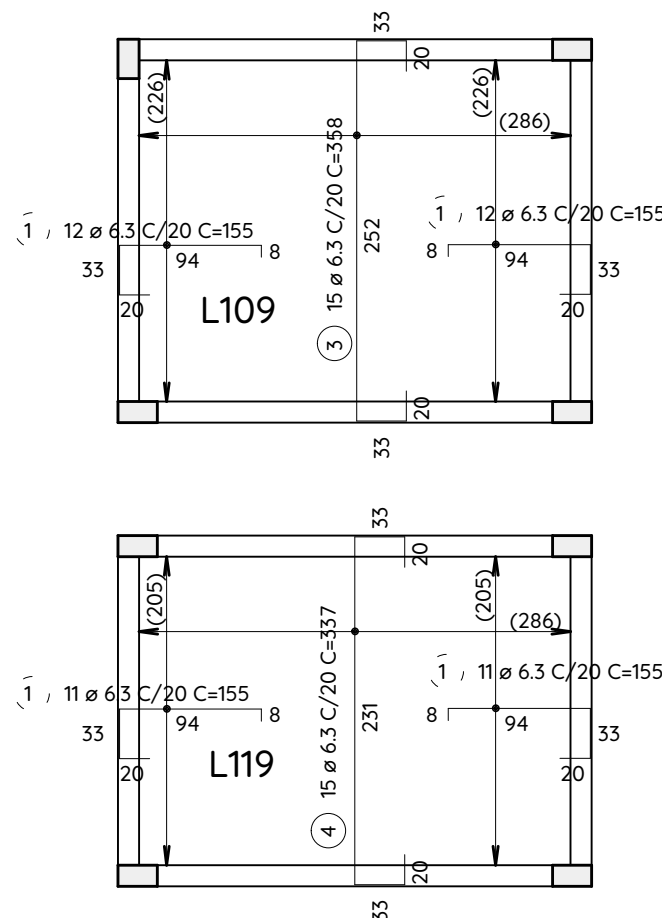
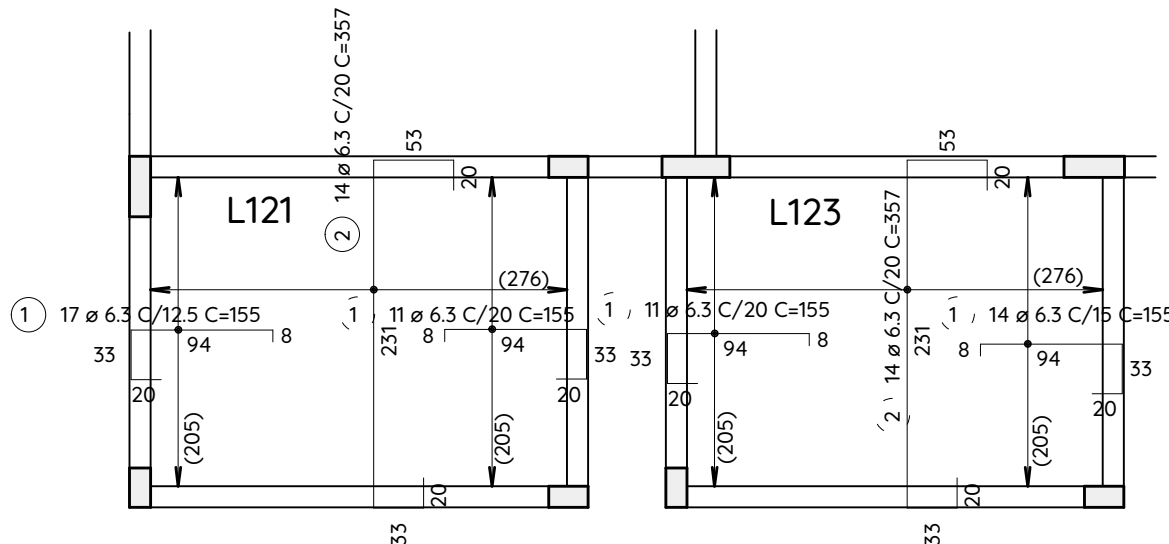


VERIFICAR CONTRA FLECHA CF
FORMA COBERTA - NÍVEL 2

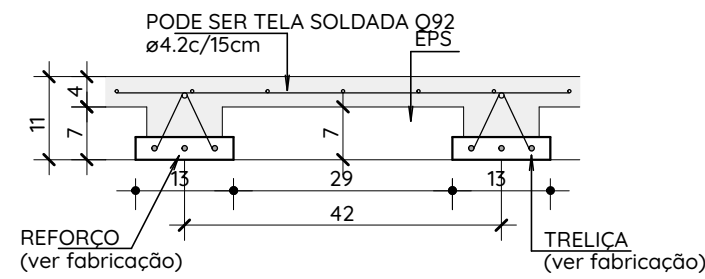
ARMADURA POSITIVA RESERVATÓRIOS



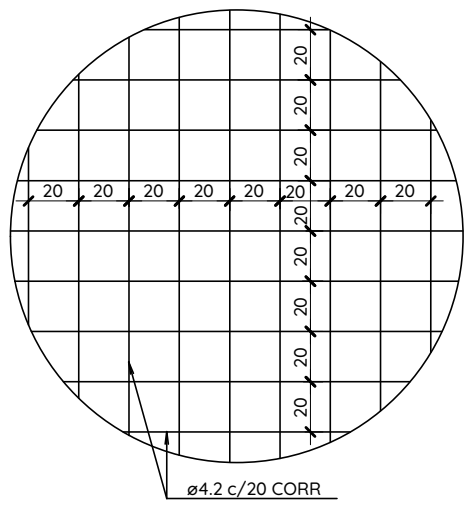
ARMADURA NEGATIVA RESERVATÓRIOS



DETALHE
LAJE LT-11



ARMADURA DE DISTRIBUIÇÃO



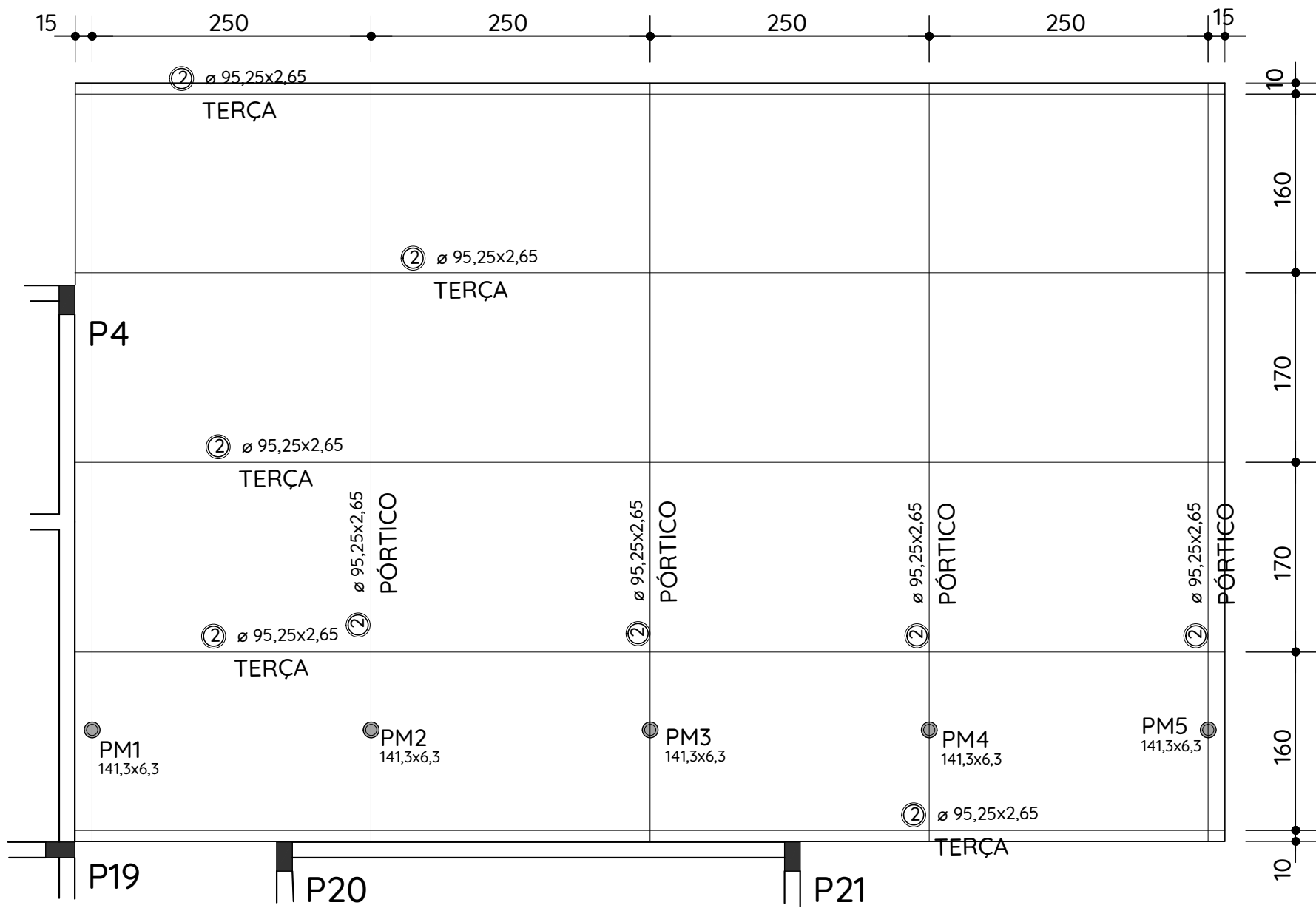
PODE SUBSTITUIR POR TELA SOLDADA Q92

ESPECIFICAÇÃO DA ESTRUTURA	
CLASSE DE AGRESSIVIDADE	II
CONCRETO	C35 - fck=35MPa
FATOR ÁGUA/CEMENTO	α=0,45
COBRIMENTOS	PILARES/VIGAS = 2,5cm LAJES = 2,0cm
CONTROLE RÍGIDO DE QUALIDADE E TOLERÂNCIA DE MEDIDAS	
LEGENDA DE PILARES	
NASCE	
PASSA	
MORRE	

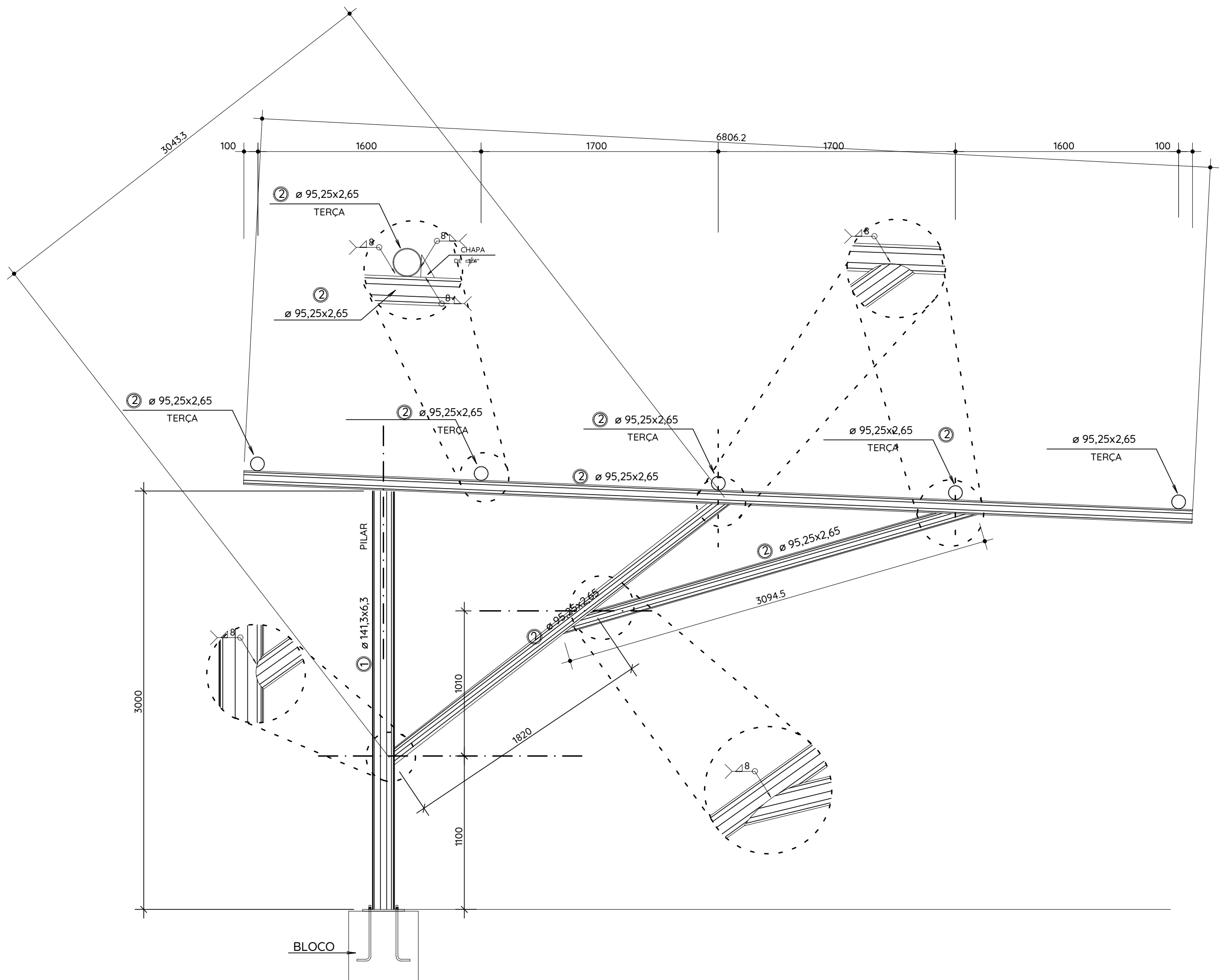
TABELA DE FERROS				
POS	BIT (mm)	QUANT	UNIT (cm)	TOTAL (cm)
ARMADURA NEGATIVA RESERVATÓRIOS				
1	6.3	99	155	15345
2	6.3	28	307	9996
3	6.3	15	308	5370
4	6.3	15	337	5055
ARMADURA POSITIVA RESERVATÓRIOS				
1	6.3	47	229	11233
2	6.3	14	310	4340
3	6.3	14	318	4452
4	6.3	23	268	6164
5	6.3	20	247	4940
6	6.3	27	328	8856
ARMADURA DE DISTRIBUIÇÃO				
1	4.2	235	950	223250
RESUMO AÇO CASO-60				
(*) tabela sem perda de aço				
ACO	BIT (mm)	COMPR	PESQ(*)	
60B	4.2	235	245	
50A	6.3	758	186	
Peso Total	60B =		245 kgf	
Peso Total	50A =		186 kgf	

Projeto de fabricação de vigotas treliçadas
Sem escala - LAJES COBERTA NÍVEL 2

VT101A L101A,L121A 4 Unidades	
VT101B L101B,L121B 2 Unidades	
VT101C L101C,L118A L121C,L123 9 Unidades	
VT101D L101D,L110,L121D 5 Unidades	
VT105A L101E,L105,L106 L107,L108,L110 L218A,L120,L121E 56 Unidades	
VT101G L101G 2 Unidades	
VT103A L103,L104 11 Unidades	
VT113A L113,L114 L115,L116 60 Unidades	
VT118B L101F,L118B,L121F, 3 Unidades	



FORMA DA COBERTA METÁLICA



CORTE A - A

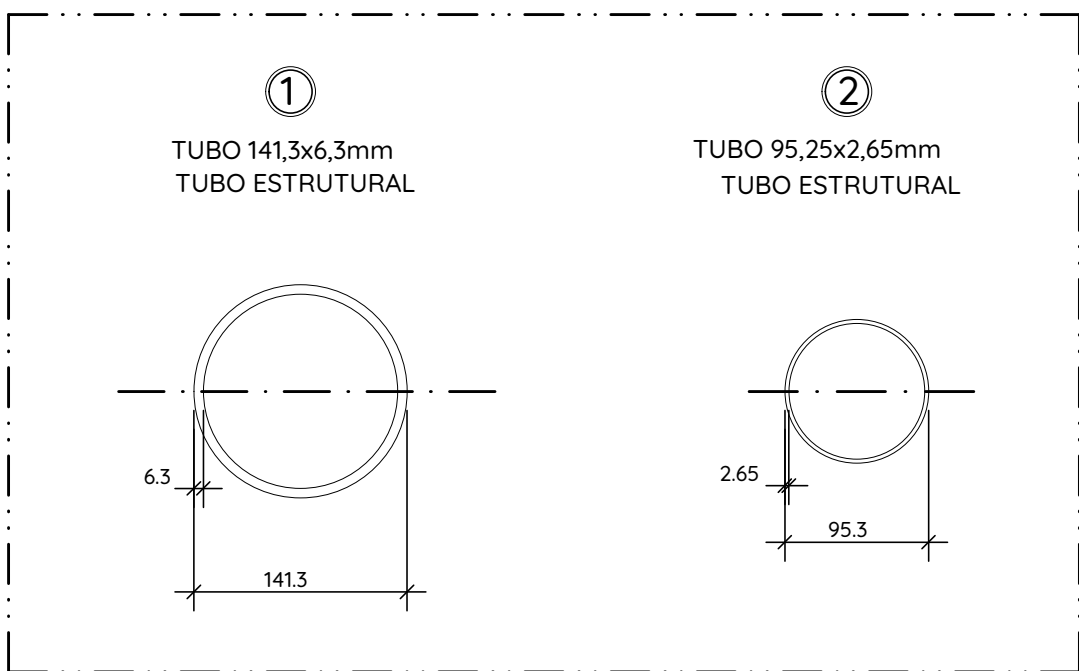
ESC. 1/25

QUADRO RESUMO

ITEM	QT	DESCRIÇÃO	MEDIDA	MATERIAL	PESO Kg
1		TUBO 141,3x6,3mm	(20,97kg/m)	ASTM A-500	314,55
2		TUBO 95,25x2,65mm	(6,05Kg/m)	ASTM A-500	668,53
CH-1	05	CHAPA DE 5/8"	(125,44kg/m2)	ASTM A-36	56,45
12		CHUBADOR DE ø 5/8"	(1,57kg/m2)	SAE-1020	15,70

PESO TOTAL = 1055,23 kgf

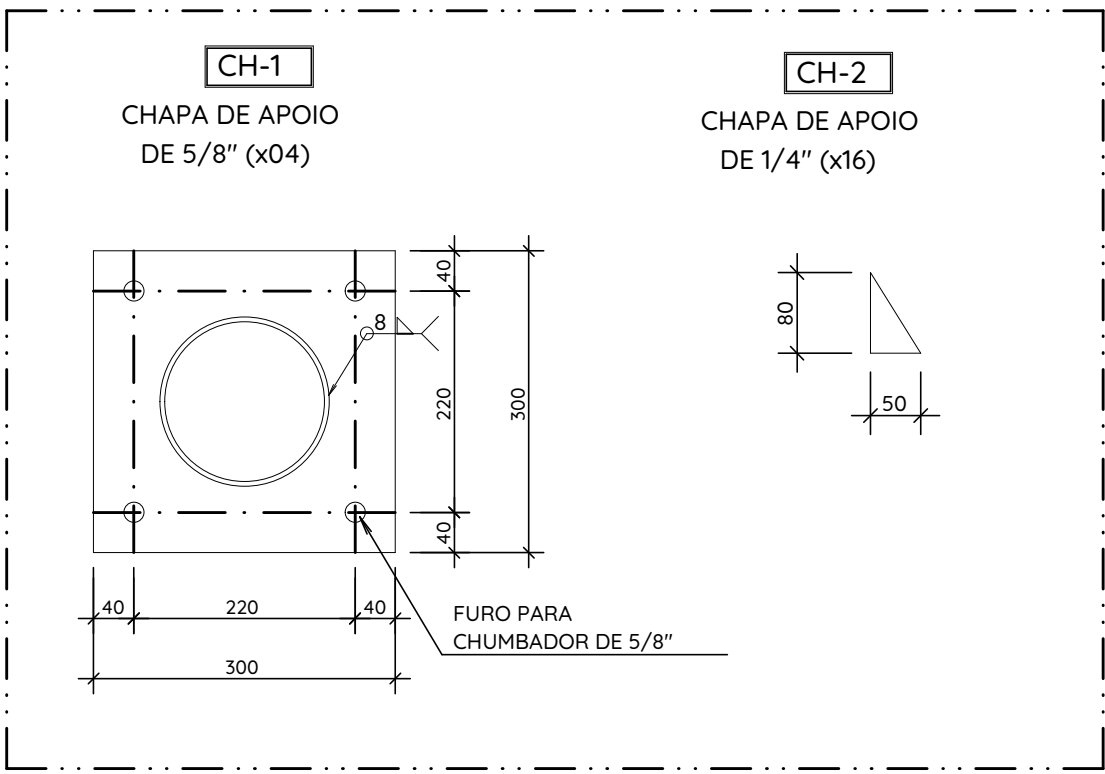
PERFIS



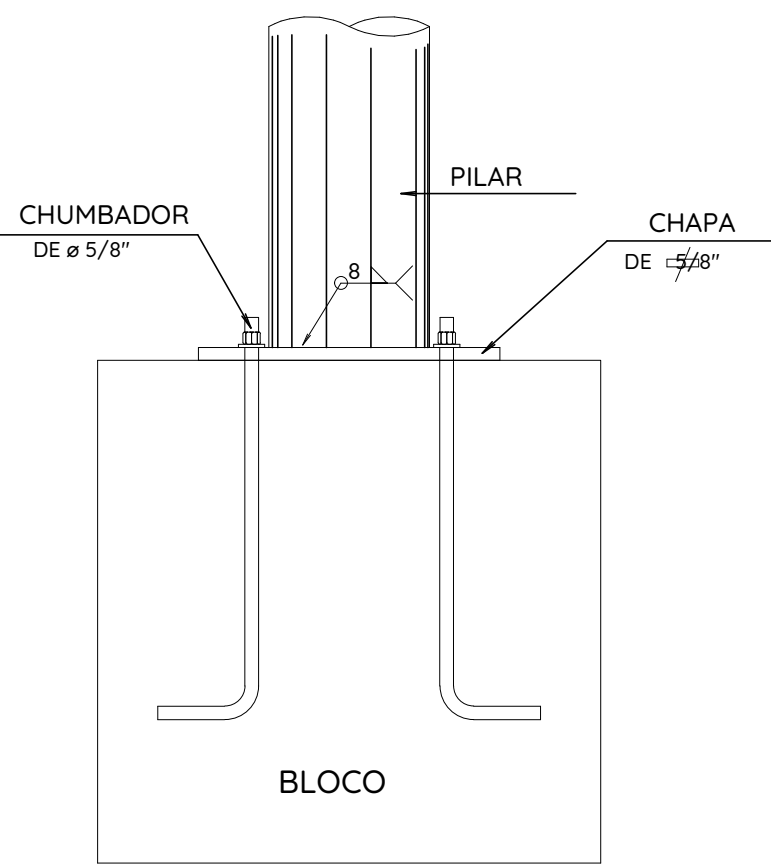
NOTAS GERAIS:

- 01 - PERFIS:
CHAPAS DE AÇO ASTM-A36 - fy> 2500kg/cm²
TUBO ESTRUTURAL ASTM-A500 - fy> 2500kg/cm²
- 02 - SOLDAS - ELETRODOS E7018.
- 03 - SOLDAR TODAS AS SUPERFÍCIES EM CONTATO ENTRE OS TUBOS.
- SOLDA CONTÍNUA COM FILETE MÍNIMO DE 3mm, EXCETO ONDE INDICADO.
- 04 - O DETALHAMENTO, FABRICAÇÃO E MONTAGEM DEVERÃO SEGUIR OS CRITÉRIOS DA NORMA ABNT, NBR - 8800 E COMPLETADA PELA AISC.
- 05 - VERIFICAR MEDIDAS EM OBRA E ADEQUAR ESTE PROJETO PARA ATENDER AS DIMENSÕES FINAIS, VERIFICANDO INTERFERÊNCIAS COM ESTRUTURAS EXISTENTES.
- 06 - PINTURA:
a) A ESTRUTURA DEVERÁ SER LIMPA ADEQUADAMENTE COM FERRAMENTAS MANUAIS, COMO ESCOVAS, RASPADORES, LIXAS E PALHAS DE AÇO.
b) A BASE TERÁ DUAS DEMÃOS DE PRIMER ALQUÍDICO COM 40 MICRAS DE ESPESURA POR DEMÃO (PÉLCULA SECA).
c) O ACABAMENTO SERÁ EM DUAS DEMÃOS DE ESMALTE ALQUÍDICO COM ESPESURA DE 40 MICRAS POR DEMÃO.
- 07 - QUAISQUER MODIFICAÇÕES DEVERÃO SER COMUNICADAS AO PROJETISTA.
- 08 - MEDIDAS EM MILÍMETROS, EXCETO ONDE INDICADO.

CHAPA

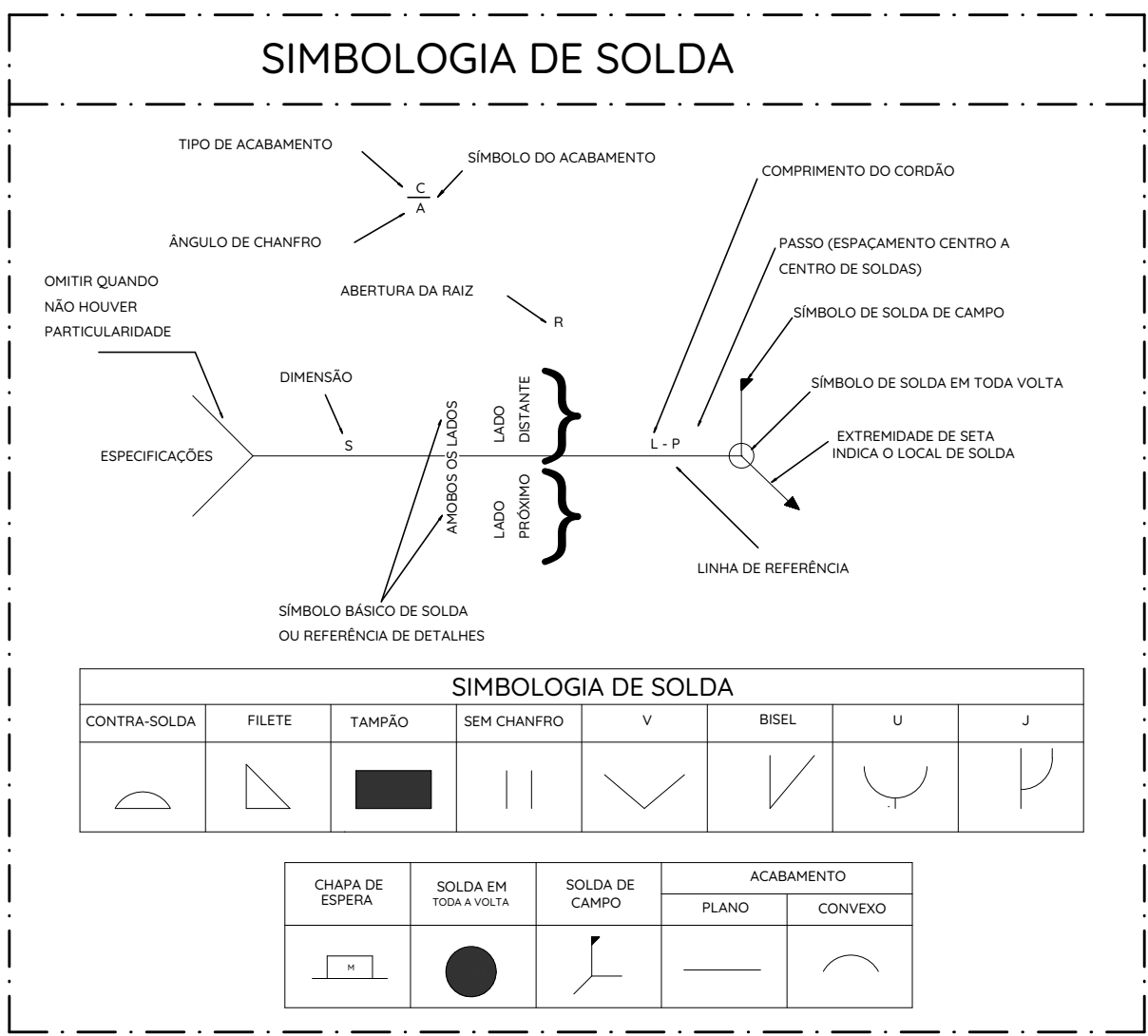
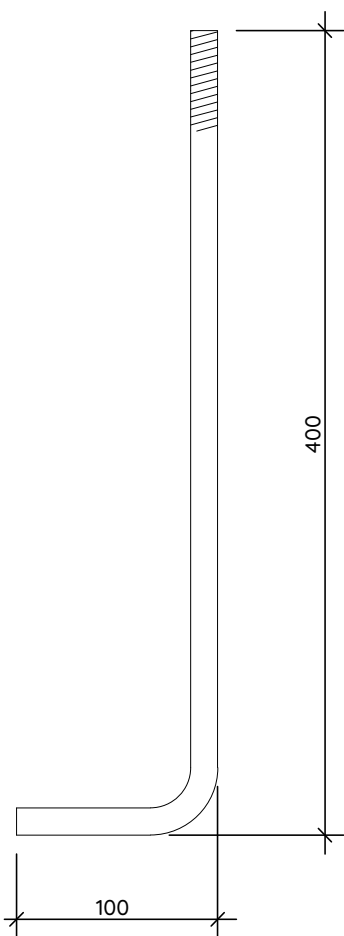


DETALHE CONSTRUTIVO DAS CHAPAS DE APOIO



CHUBADOR ø 5/8"

AÇO - SAE 1020



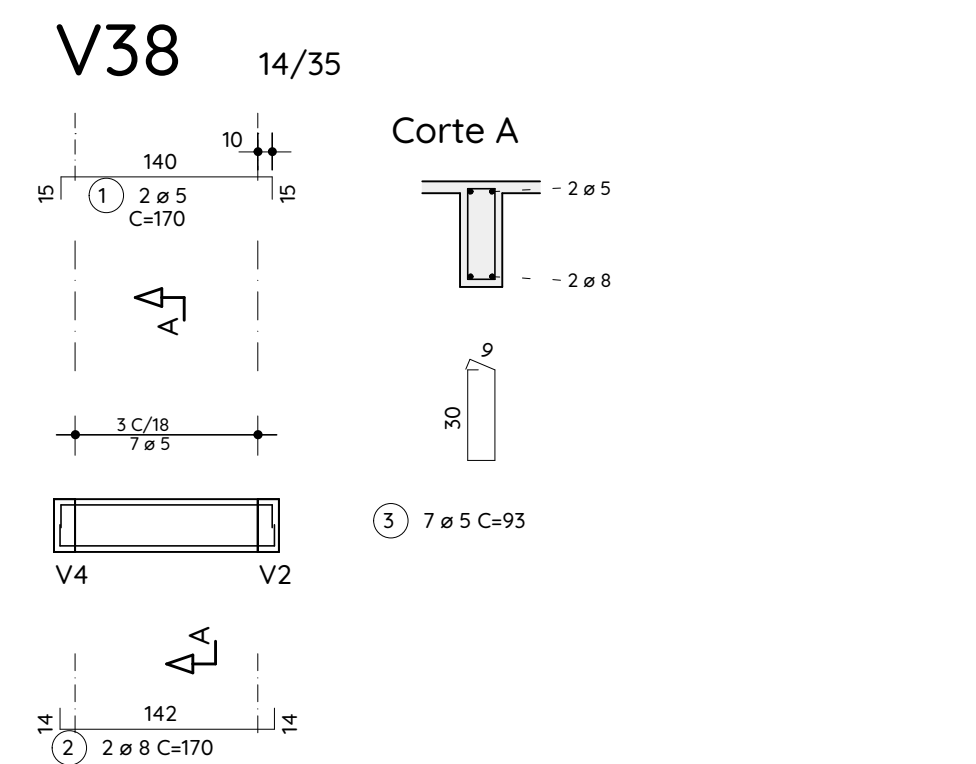
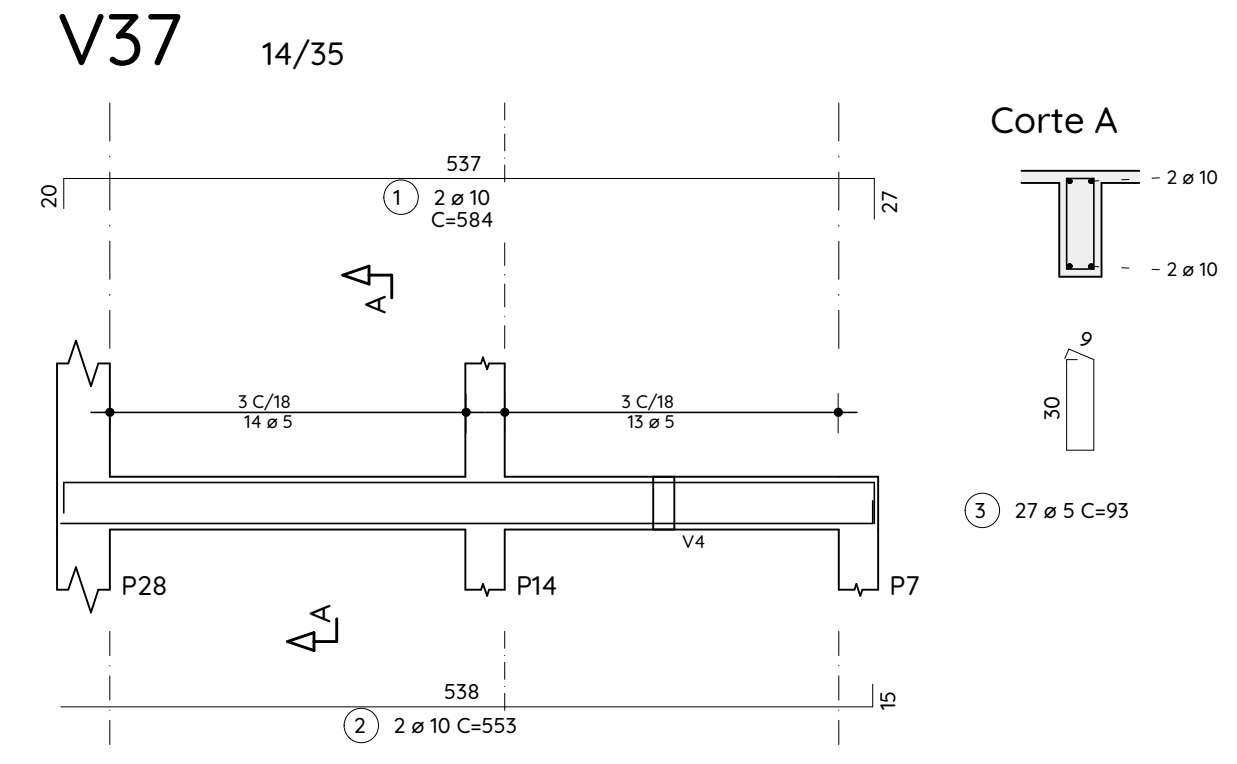
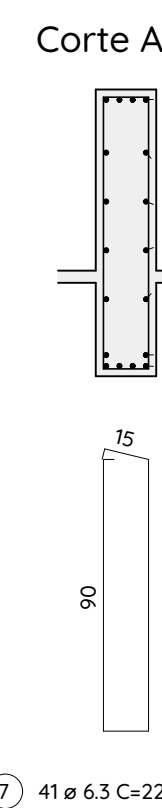
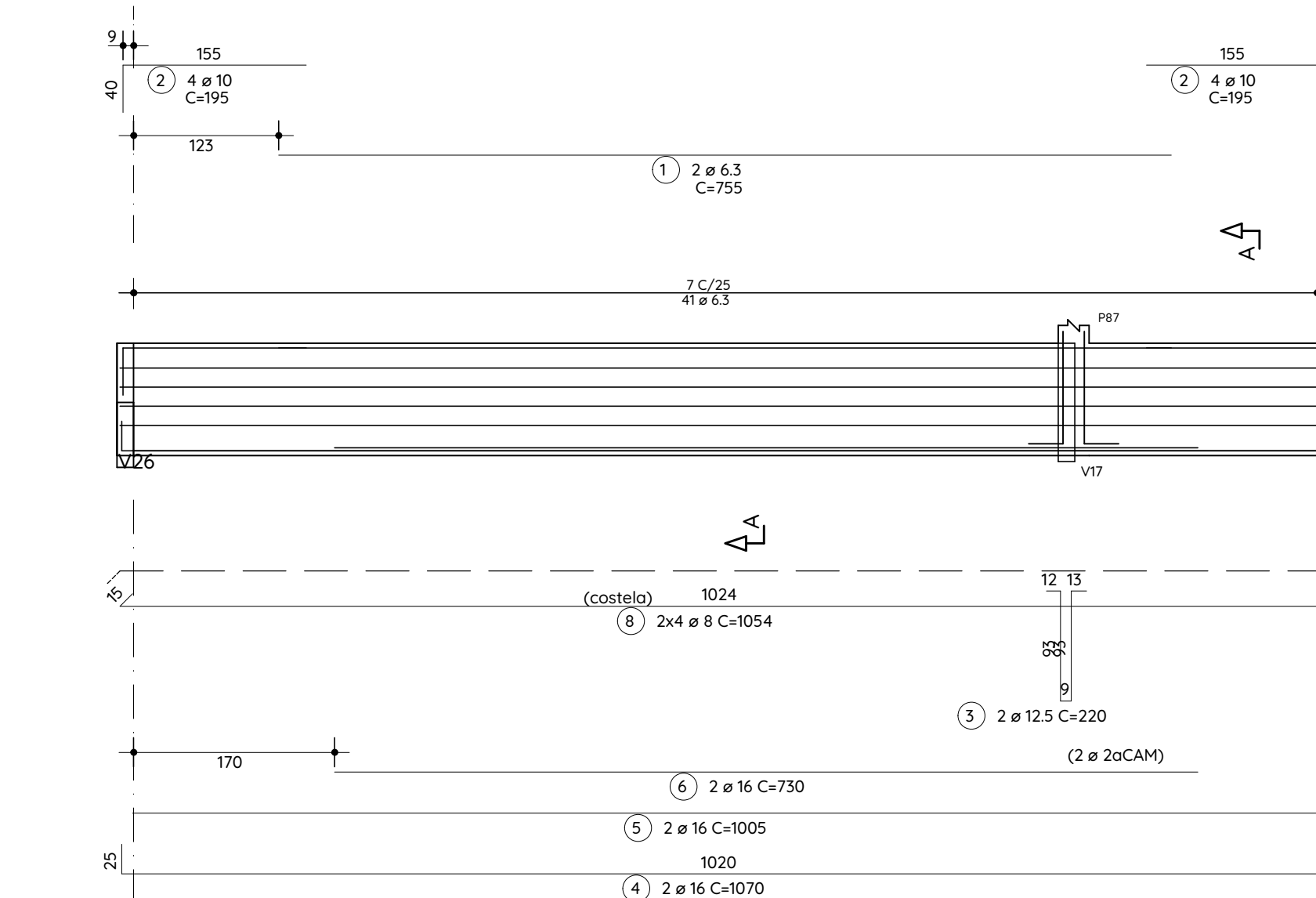
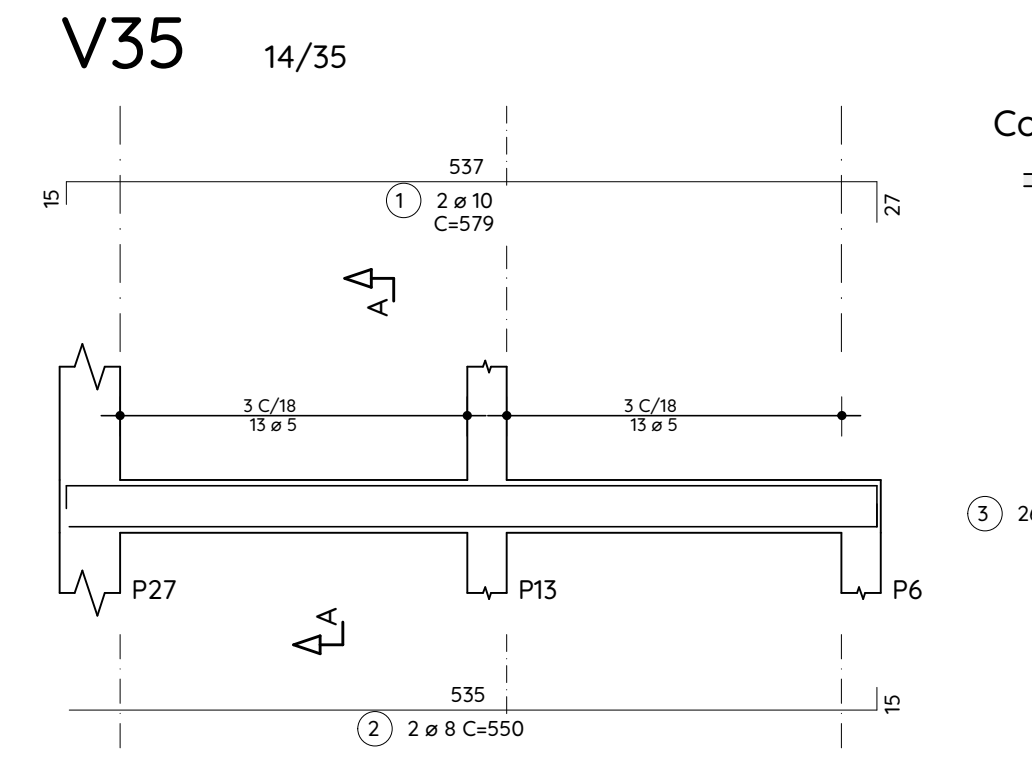
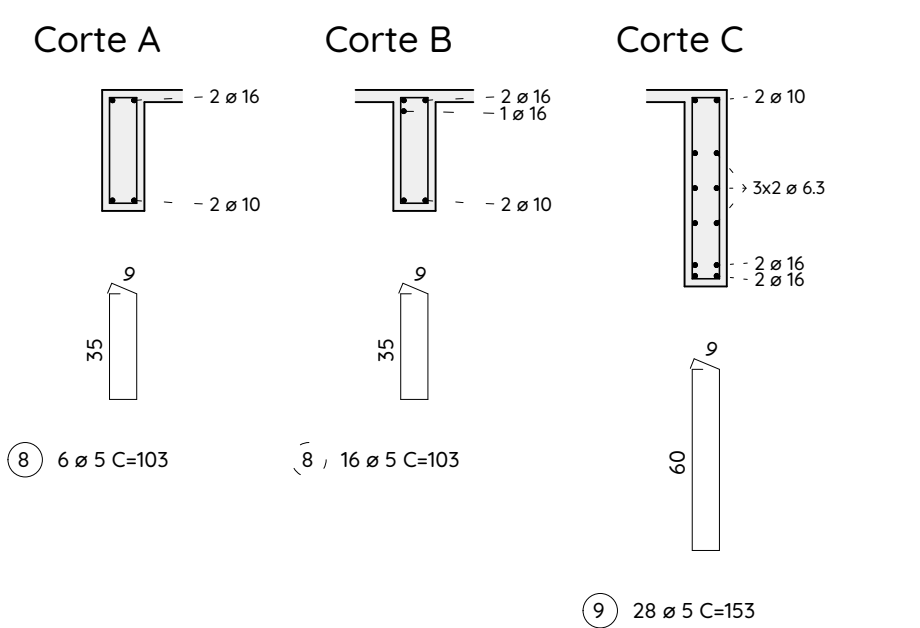
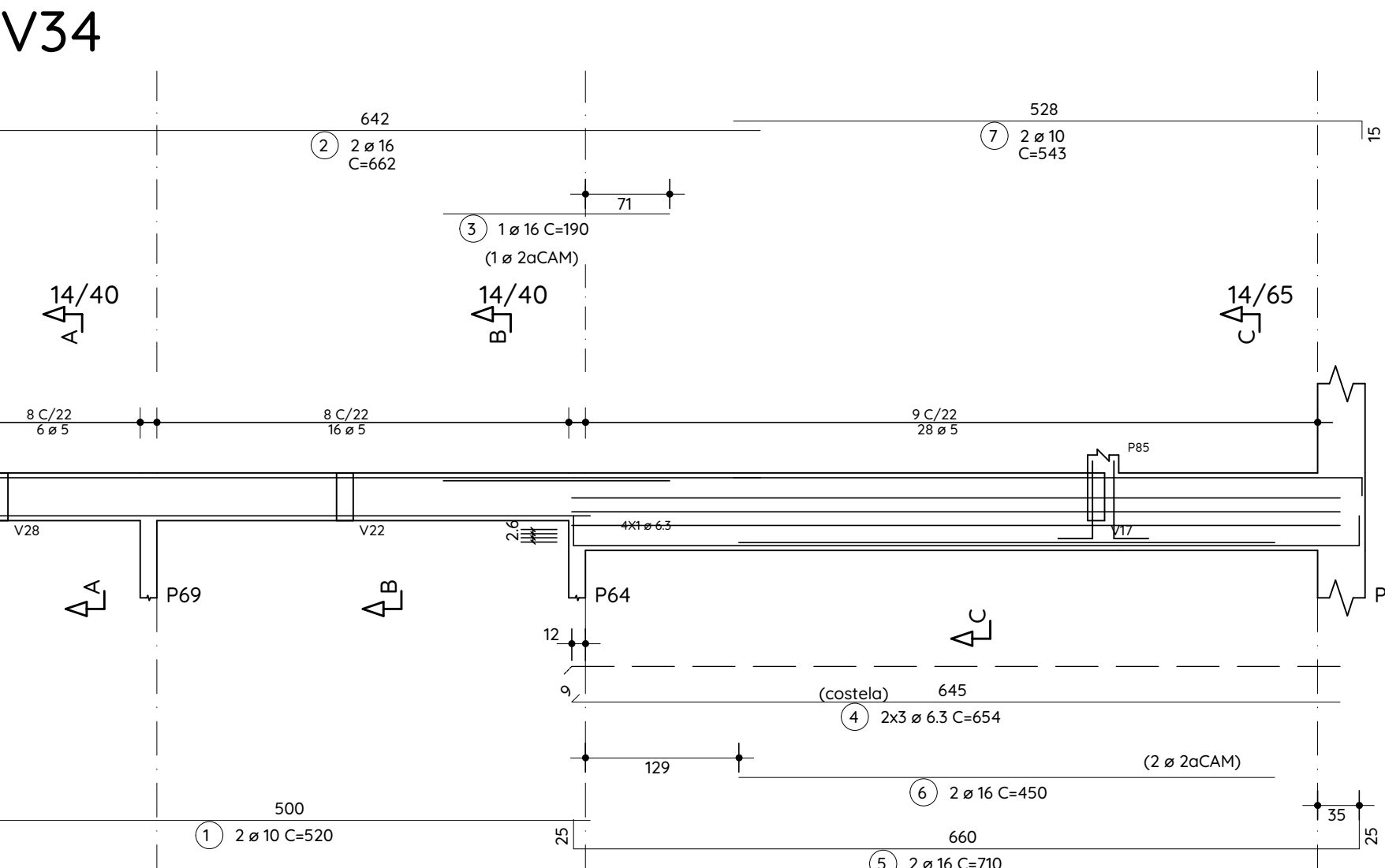
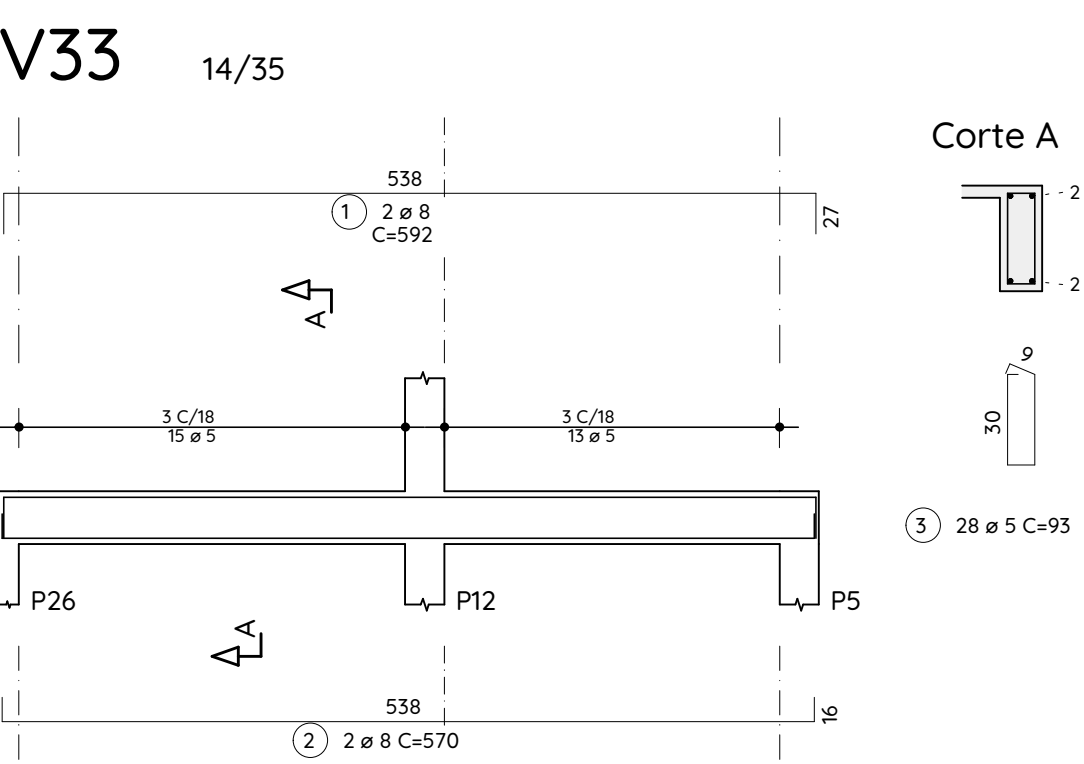
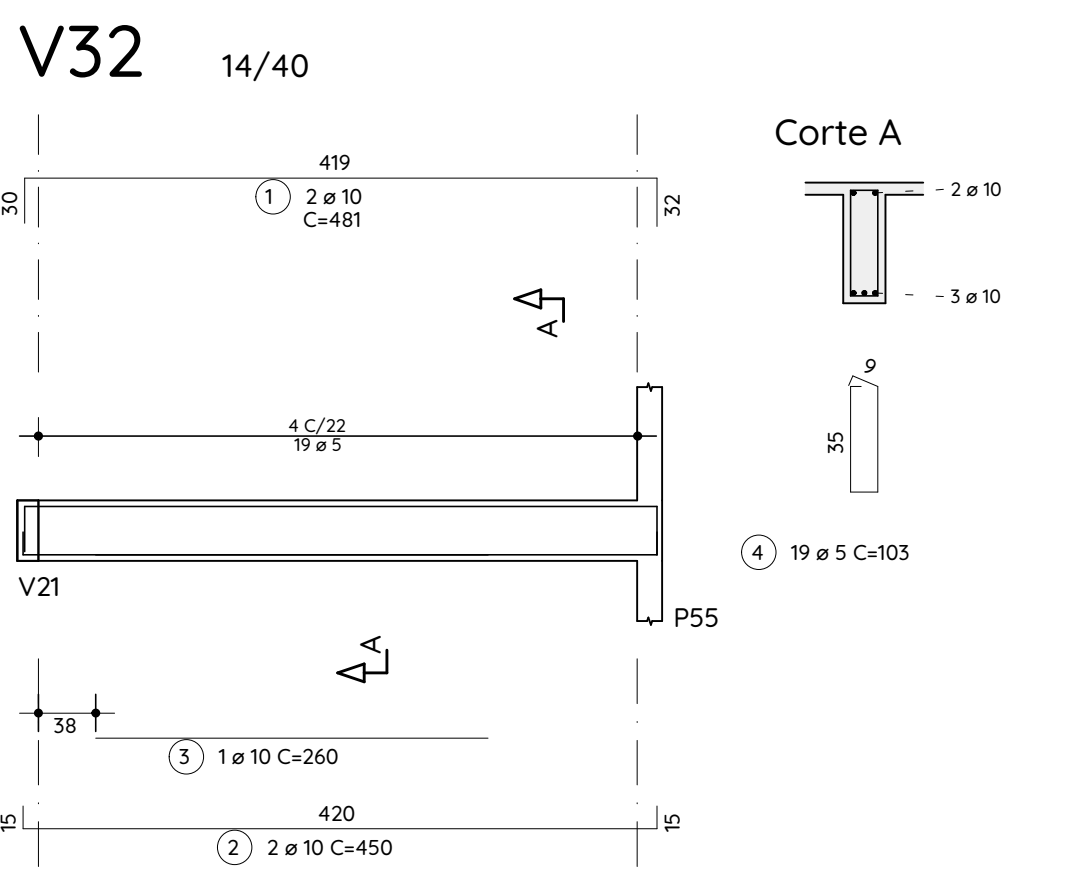
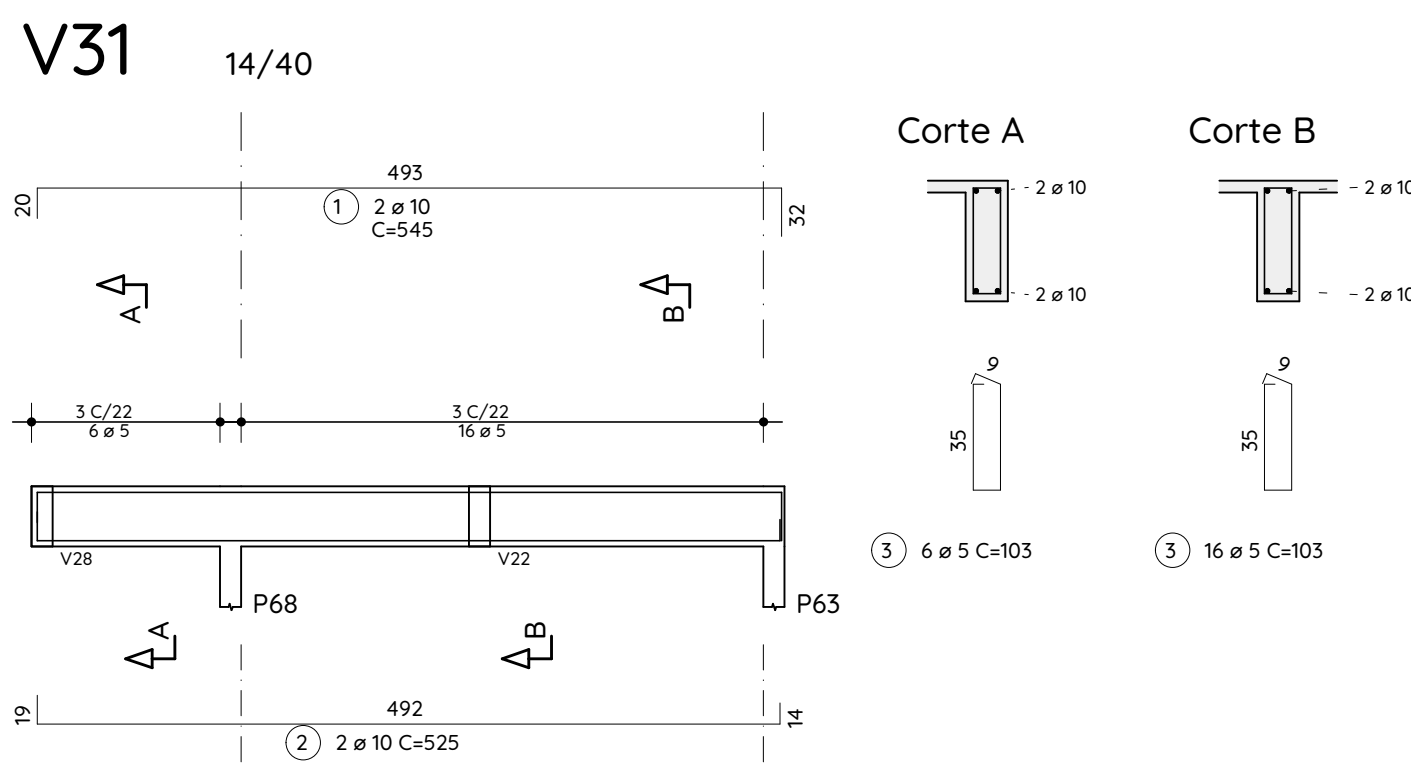
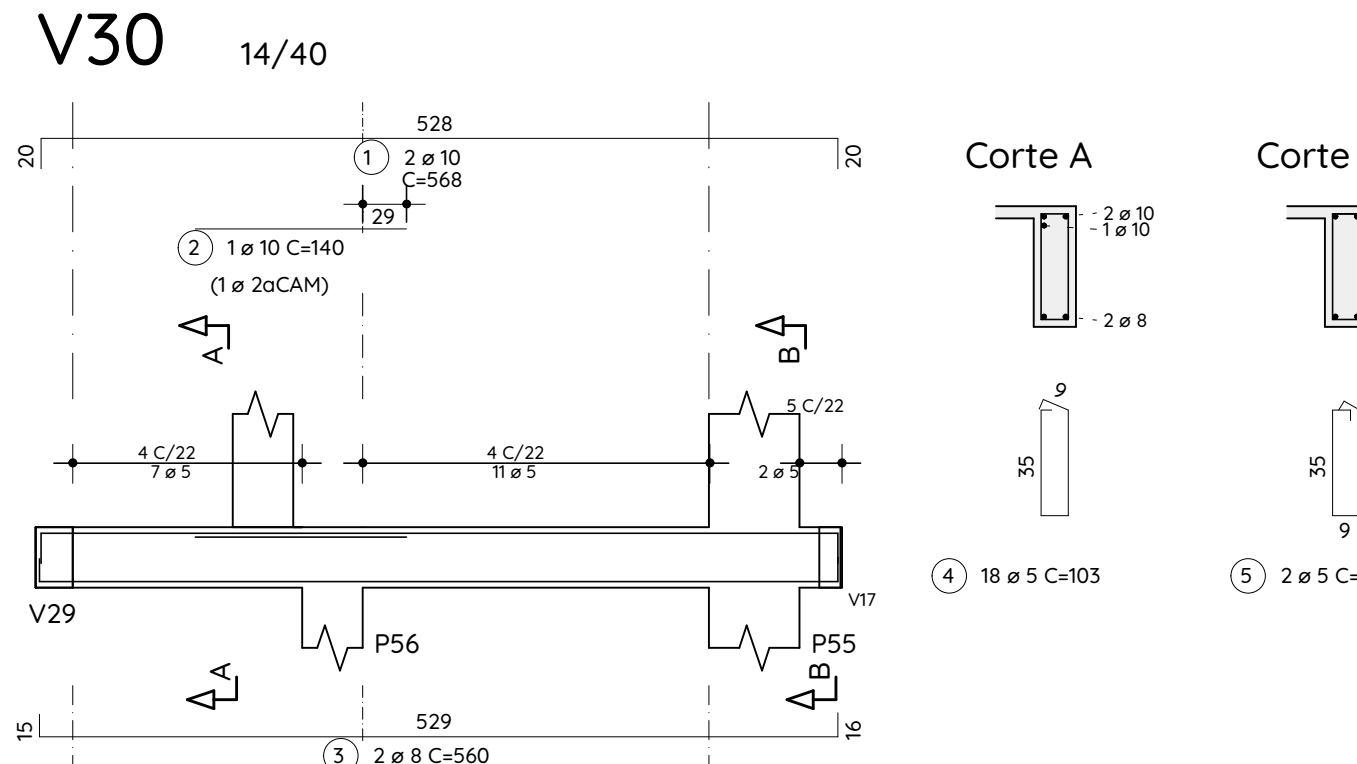
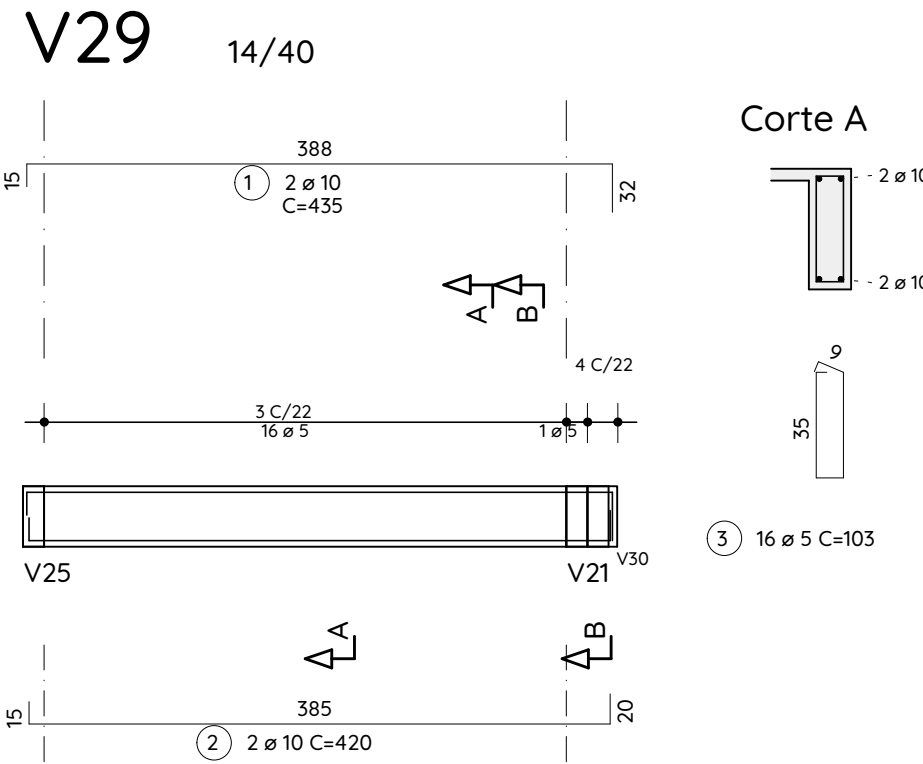
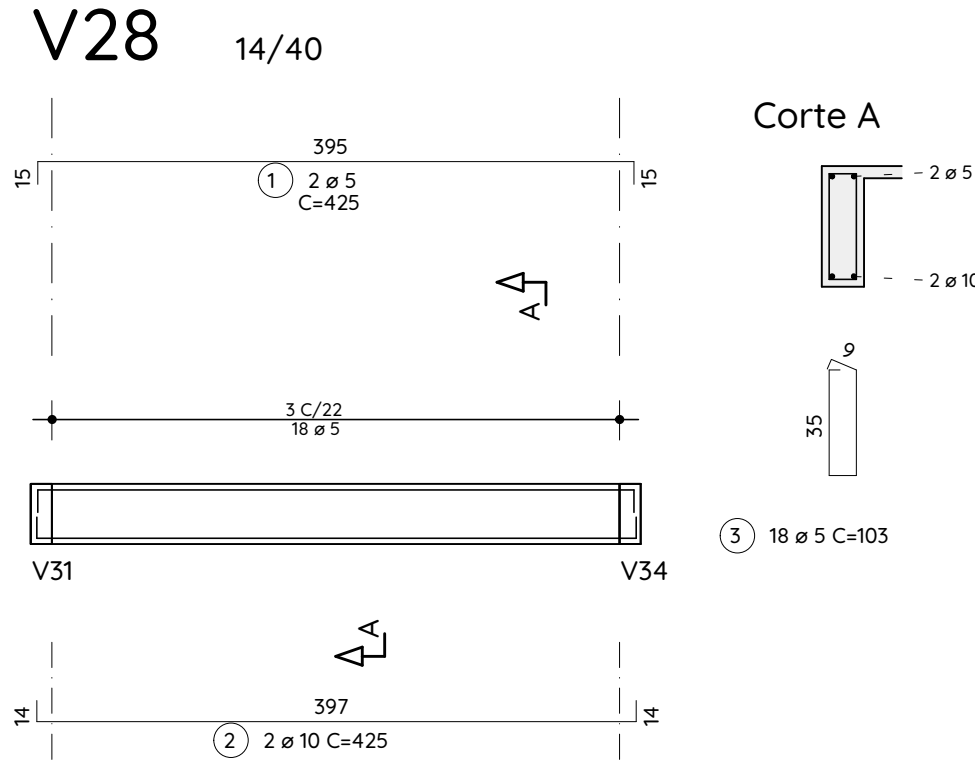
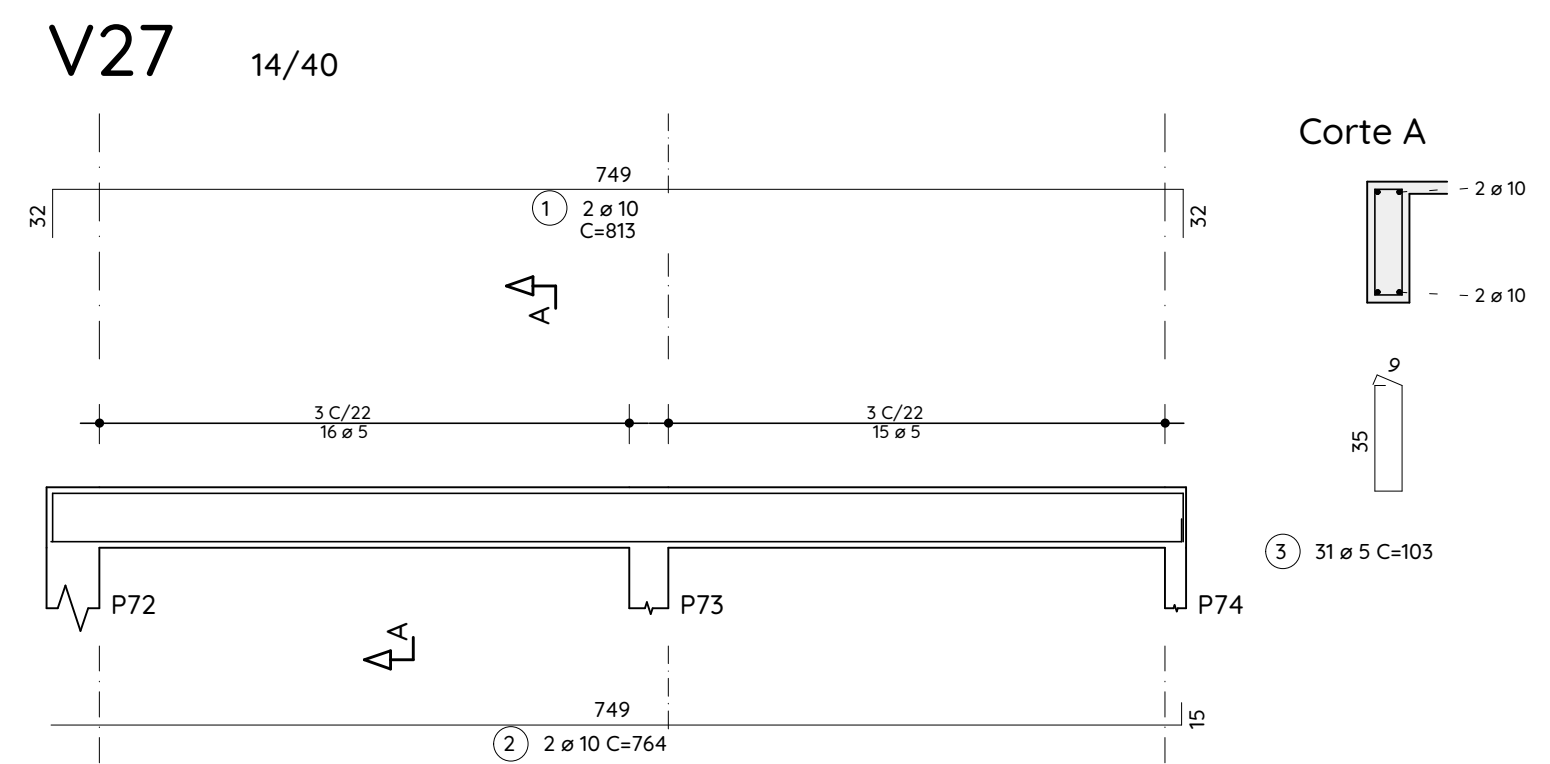
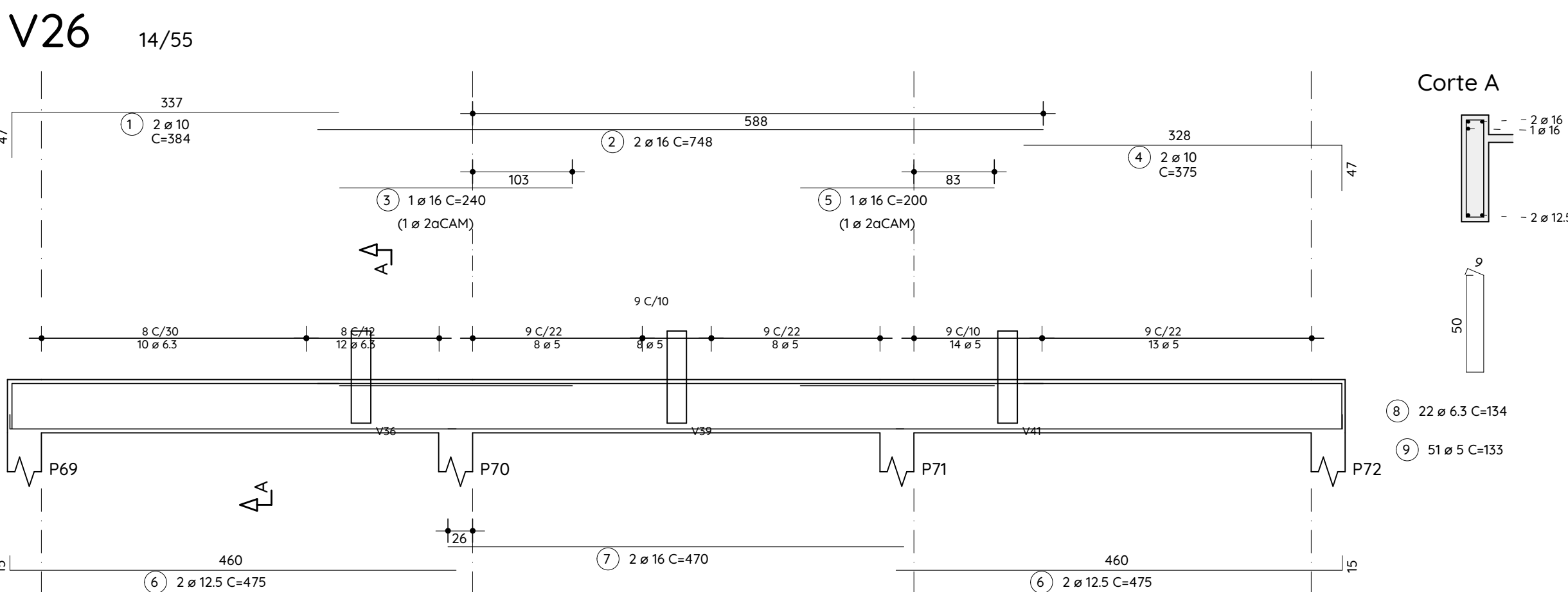
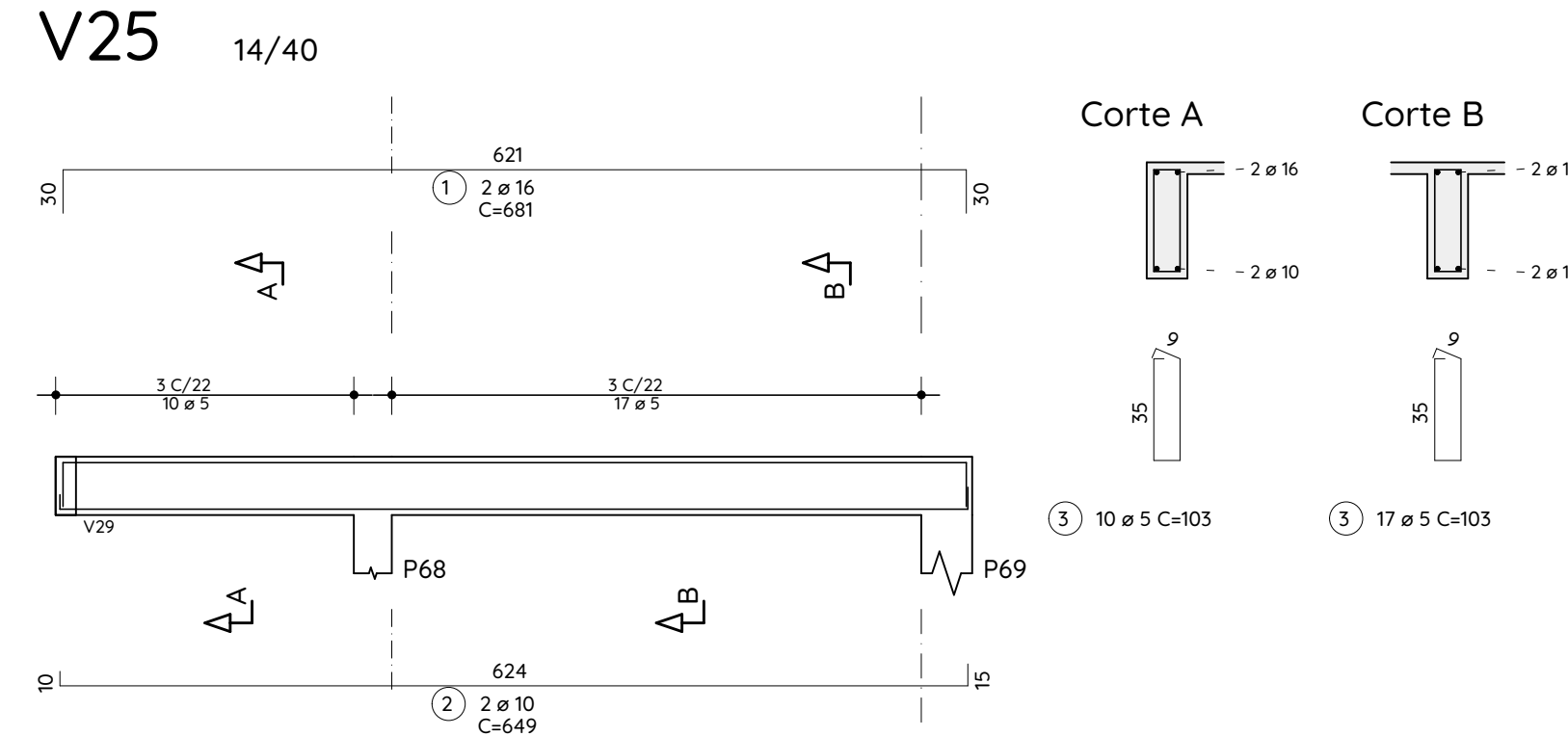
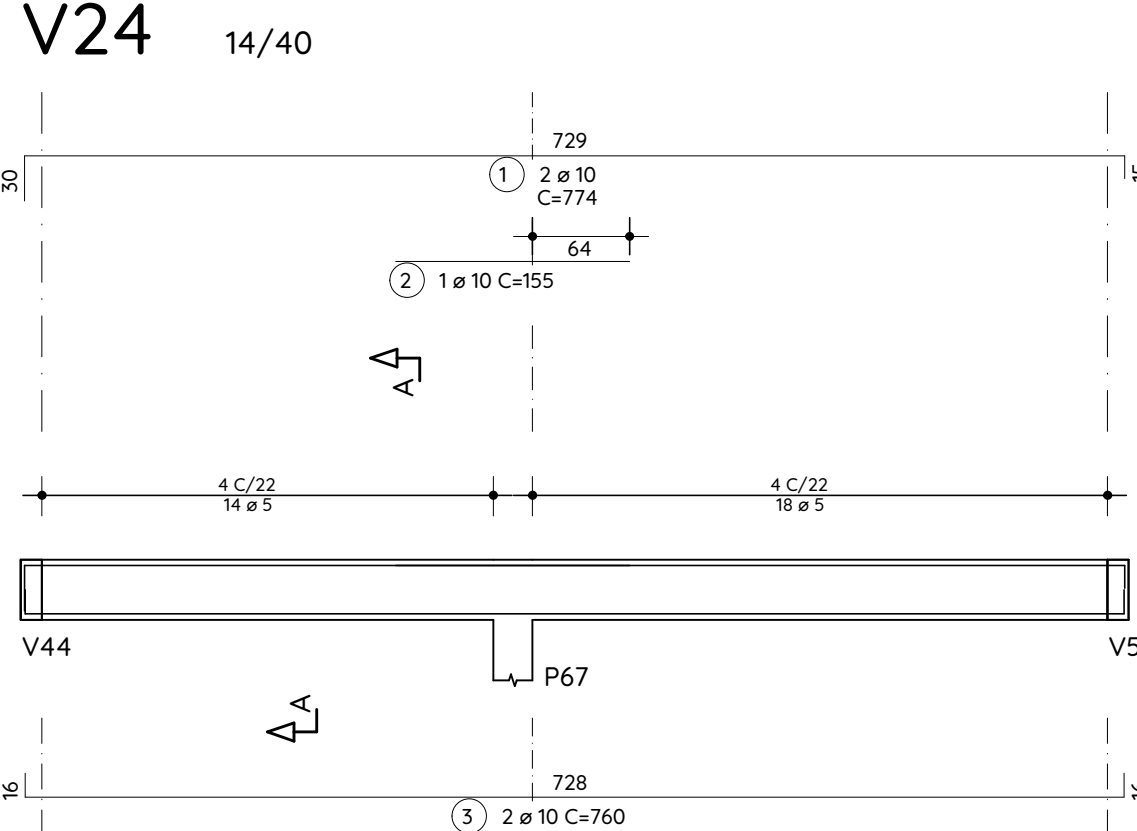
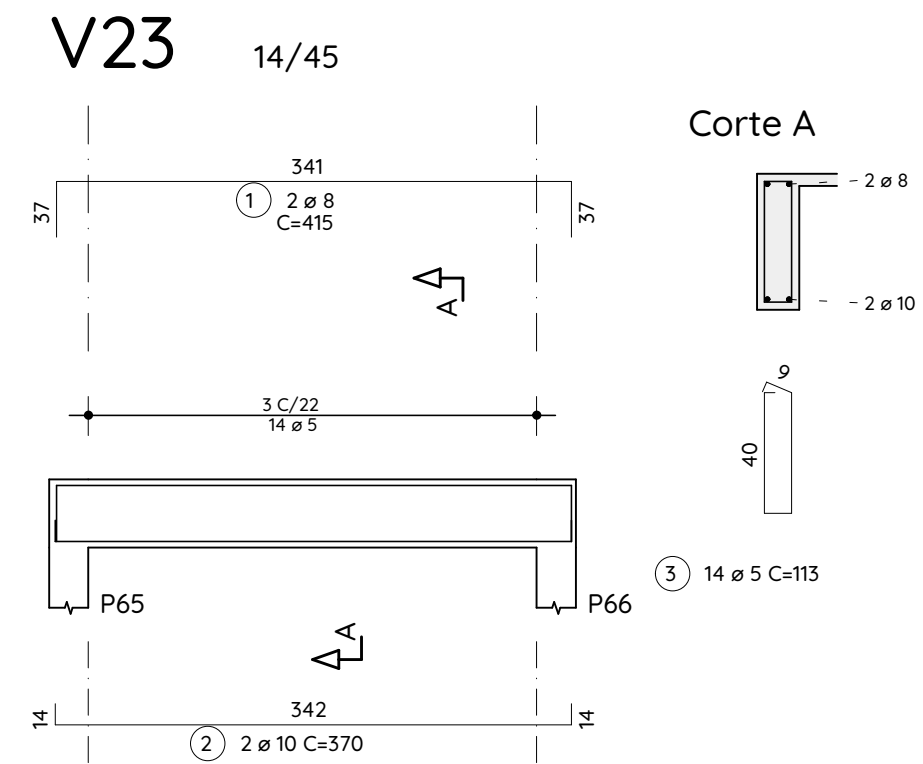
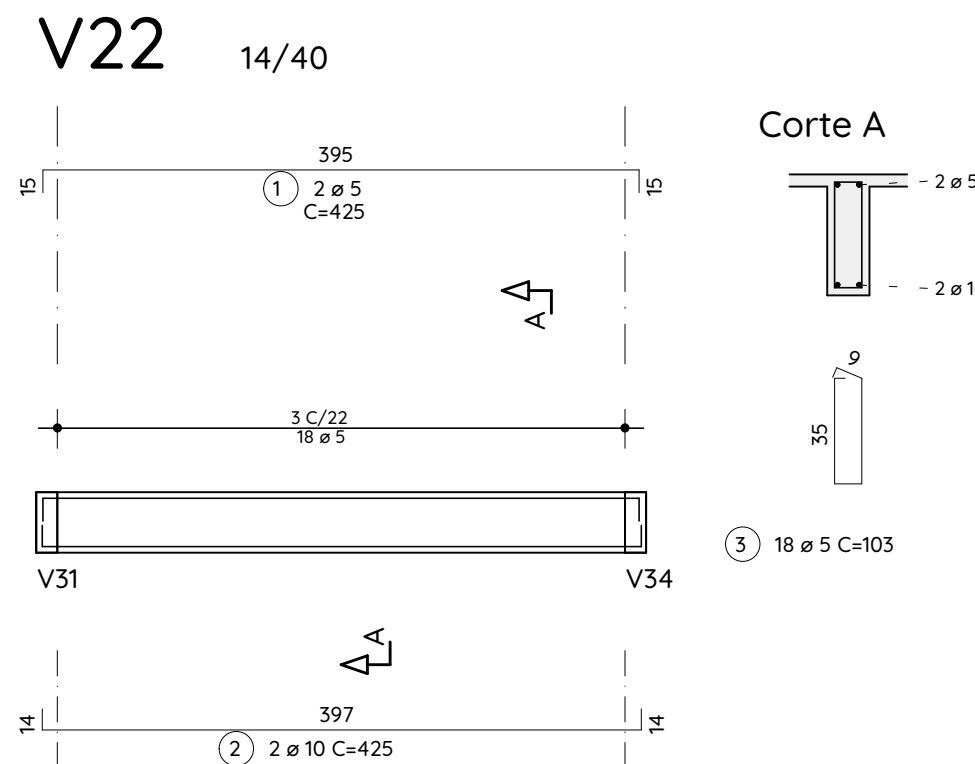
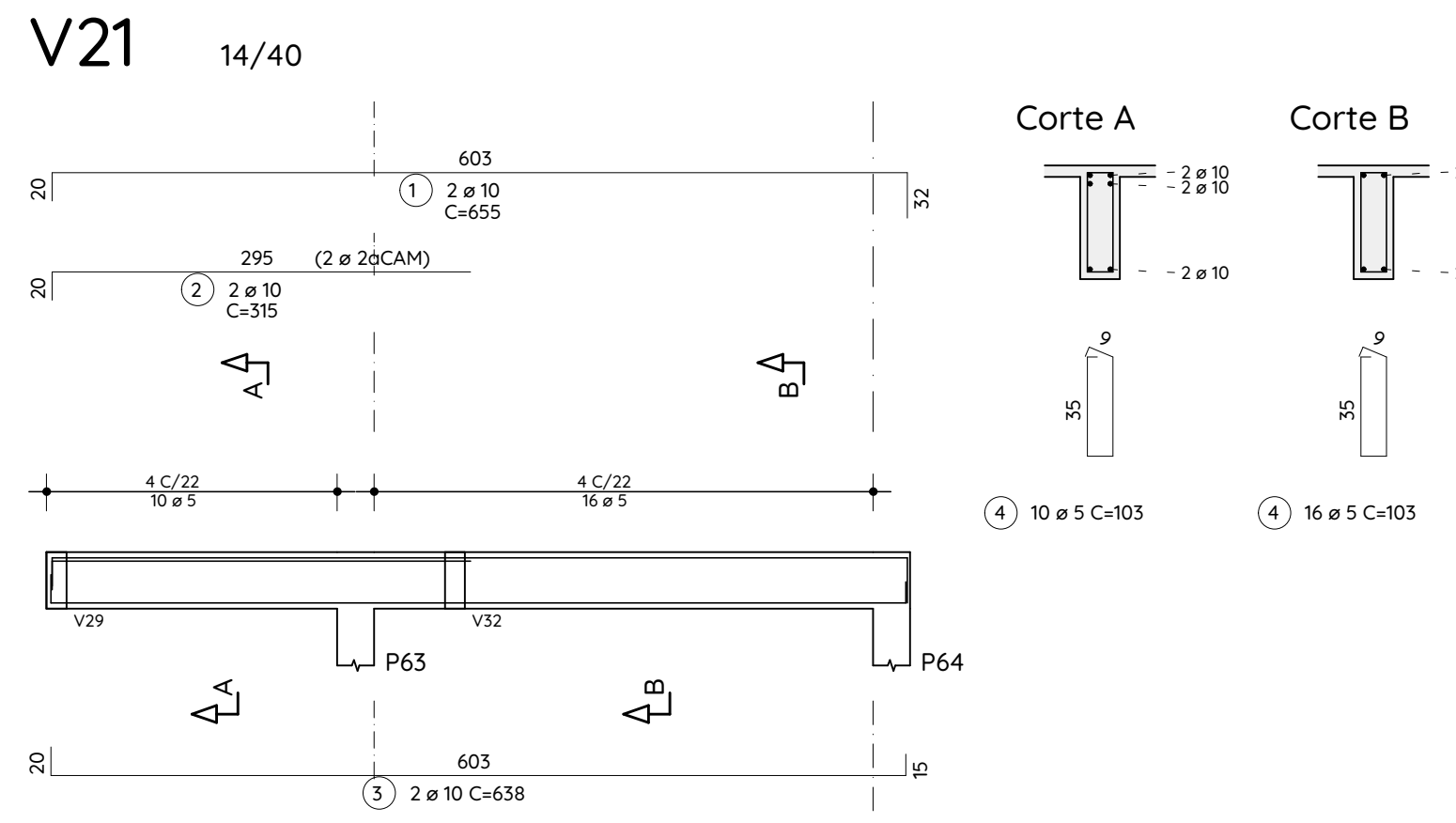
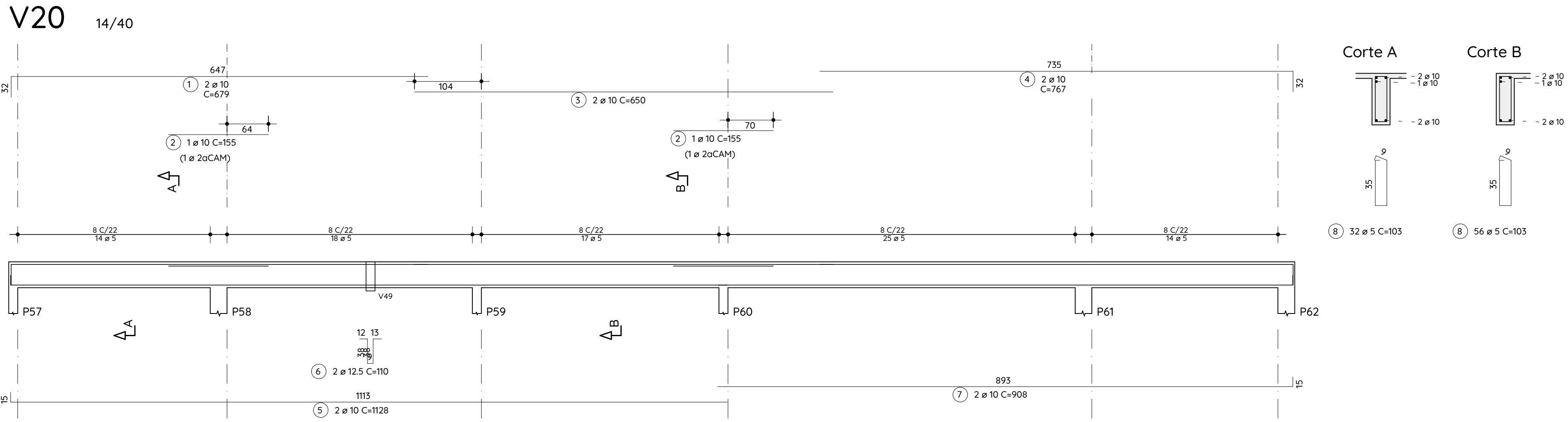
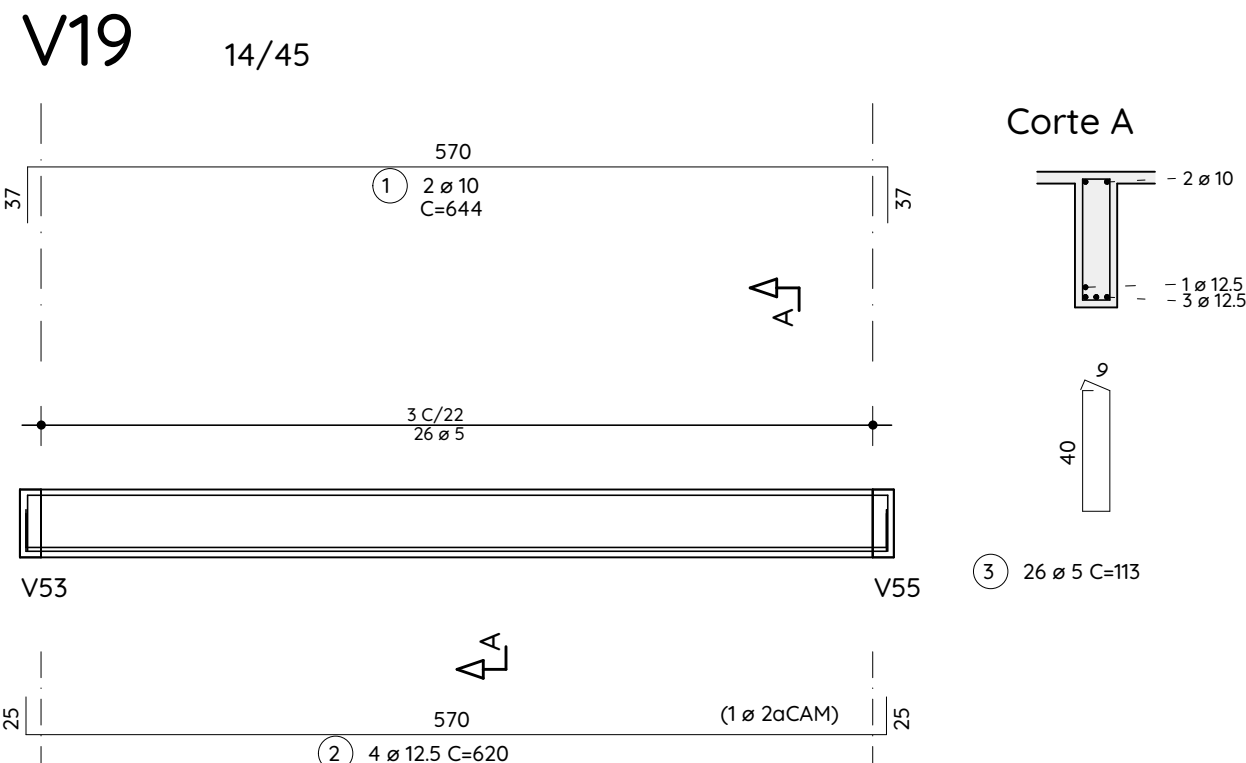
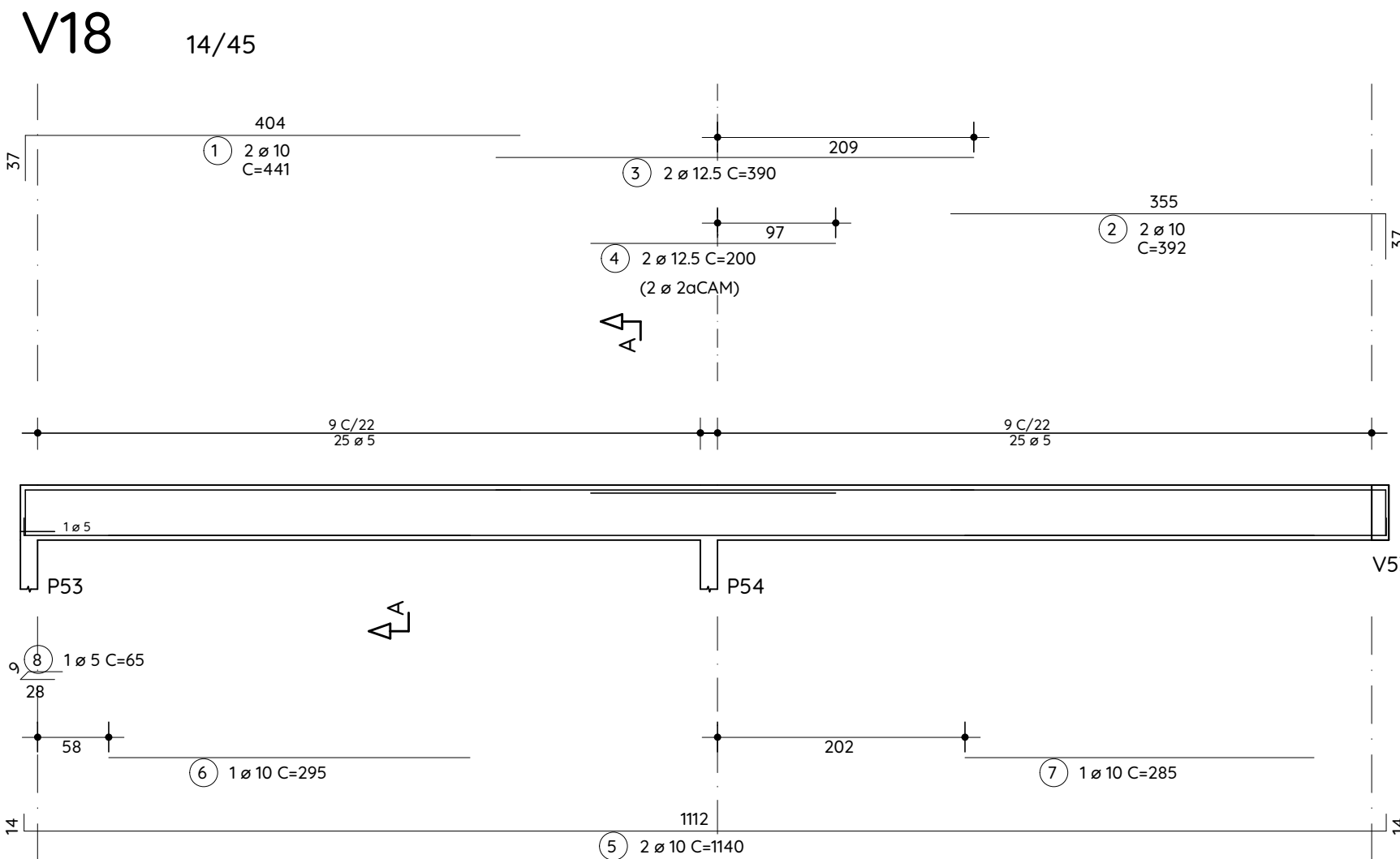
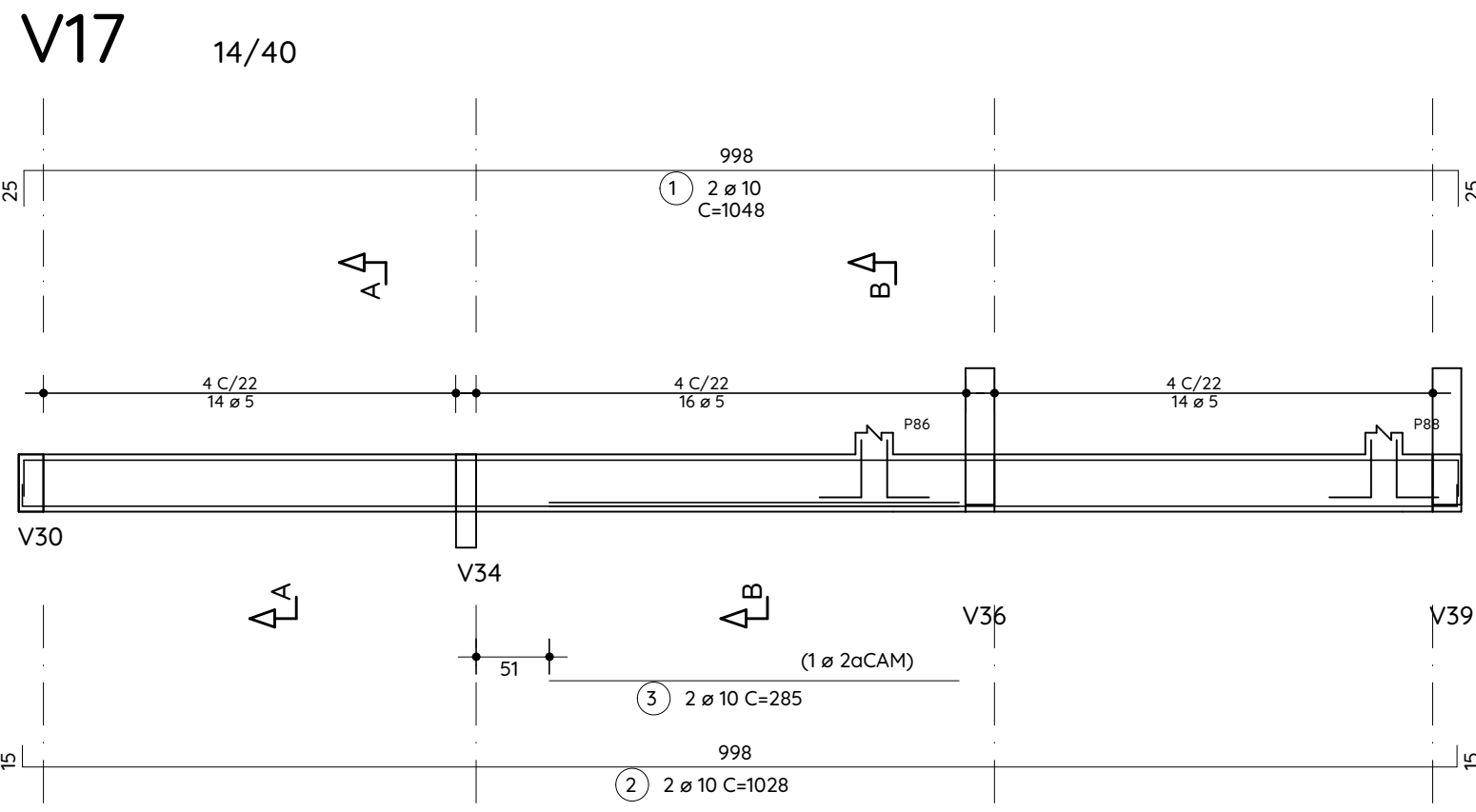


TABELA DE FERROS				TOTAL	
POS	BIT	QUANT	UNID	COTA	COTA
V17					
1	10	2	1048	2096	
2	10	2	1028	2056	
3	10	2	285	570	
4	5	44	101	4532	
V18					
1	10	2	441	882	
2	10	2	390	780	
3	12.5	2	200	400	
4	12.5	2	140	280	
5	10	2	392	784	
6	10	1	295	295	
7	10	1	285	285	
8	5	10	40	400	
V19					
1	10	2	644	1288	
2	10	2	555	1110	
3	5	26	113	2938	
V20					
1	10	2	647	1294	
2	10	2	390	780	
3	10	2	450	900	
4	10	2	767	1534	
5	10	2	555	1110	
6	12.5	2	110	220	
7	10	2	908	1816	
8	5	56	103	5656	
V21					
1	10	2	655	1310	
2	10	2	515	1030	
3	10	2	658	1316	
4	5	16	103	4072	
V22					
1	5	2	425	850	
2	10	2	425	850	
3	5	2	103	206	
V23					
1	8	2	415	830	
2	10	2	370	740	
3	5	2	113	226	
V24					
1	10	2	774	1548	
2	10	2	155	310	
3	10	2	760	1520	
4	5	32	103	3296	
V25					
1	16	2	681	1362	
2	10	2	155	310	
3	5	27	103	2781	
V26					
1	10	2	384	768	
2	10	2	748	1496	
3	16	1	240	240	
4	16	1	200	200	
5	16	4	475	1900	
6	16	2	470	940	
7	16	2	154	308	
8	5	51	153	7653	
V27					
1	10	2	815	1630	
2	10	2	764	1528	
3	5	31	103	3193	
V28					
1	5	2	425	850	
2	10	2	425	850	
3	5	16	103	1648	
V29					
1	10	2	435	870	
2	10	2	420	840	
3	5	16	103	1648	
V30					
1	10	2	568	1136	
2	10	2	560	1120	
3	10	2	560	1120	
4	5	16	103	1648	
V31					
1	10	2	545	1090	
2	10	2	525	1050	
3	5	27	103	2781	
V32					
1	10	2	481	962	
2	10	2	450	900	
3	5	19	103	1957	
V33					
1	8	2	592	1184	
2	8	2	570	1140	
3	5	28	95	2660	
V34					
1	16	2	652	1304	
2	16	2	543	1086	
3	16	2	450	900	
4	6.3	6	654	3924	
5	16	2	710	1420	
6	16	2	450	900	
7	10	2	543	1086	
8	5	22	103	2266	
9	5	28	153	4284	
V35					
1	10	2	570	1140	
2	10	2	550	1100	
3	5	27	95	2565	
V36					
1	6.3	2	755	1510	
2	10	2	195	390	
3	5	27	95	2565	
V37					
1	5	2	170	340	
2	8	2	170	340	
3	5	27	95	2565	
V38					
1	5	2	170	340	
2	8	2	170	340	
3	5	27	95	2565	

DATA: 05/05/2023

CIDADA: 0001

ESTRUTURAL

FÓRUM DA COMARCA DE CORUIPE

TÍTULO: ARMAÇÃO DE VIGAS DA COBERTA - NÍVEL 2

V17 / V18 / V19 / V20 / V21 / V22 / V23 / V24 / V25 / V26 / V27 / V28 / V29 / V30 / V31 / V32 / V33 / V34 / V35 / V36 / V37 / V38

PROJETADO: RODRIGO EVARISTO DE OLIVEIRA E SILVA

VERIFICADO: 05/05/2023

DESENHADO: F. LIMA

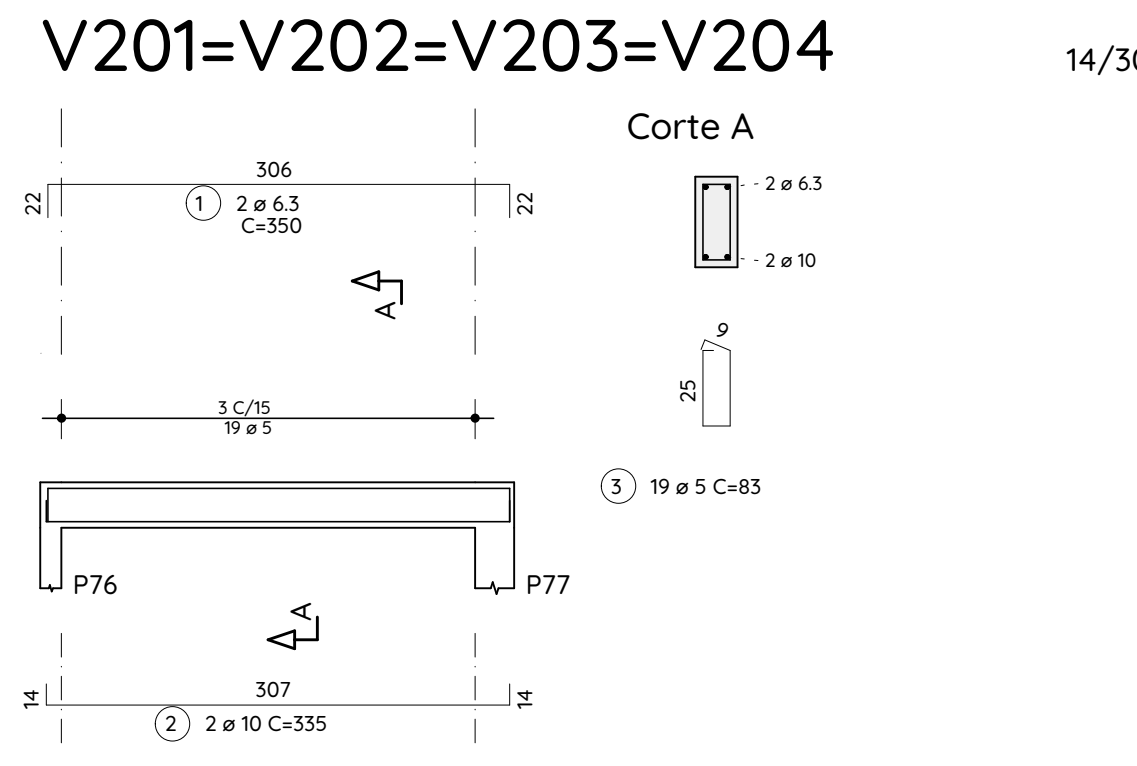
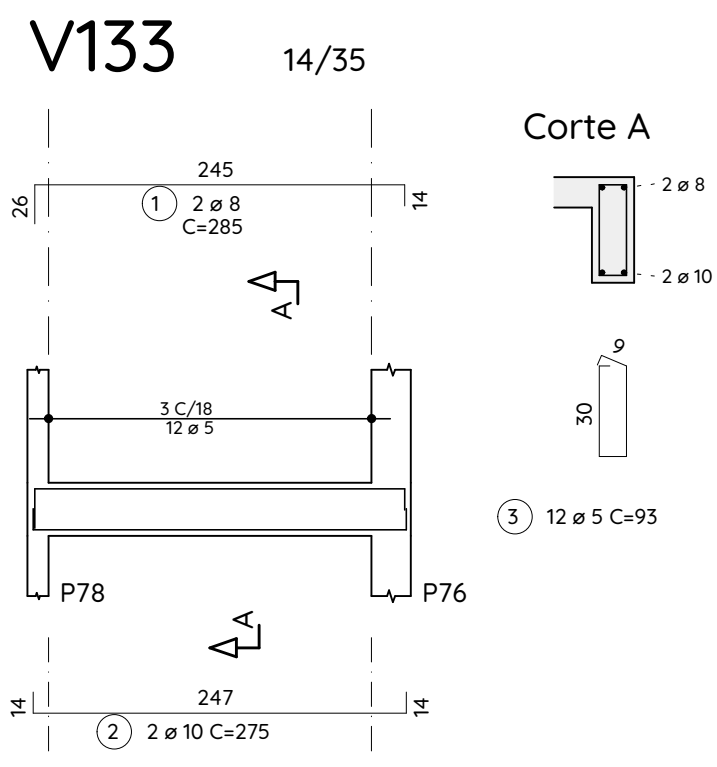
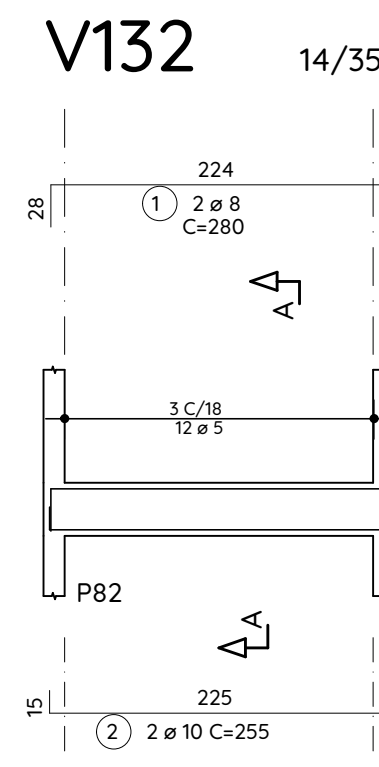
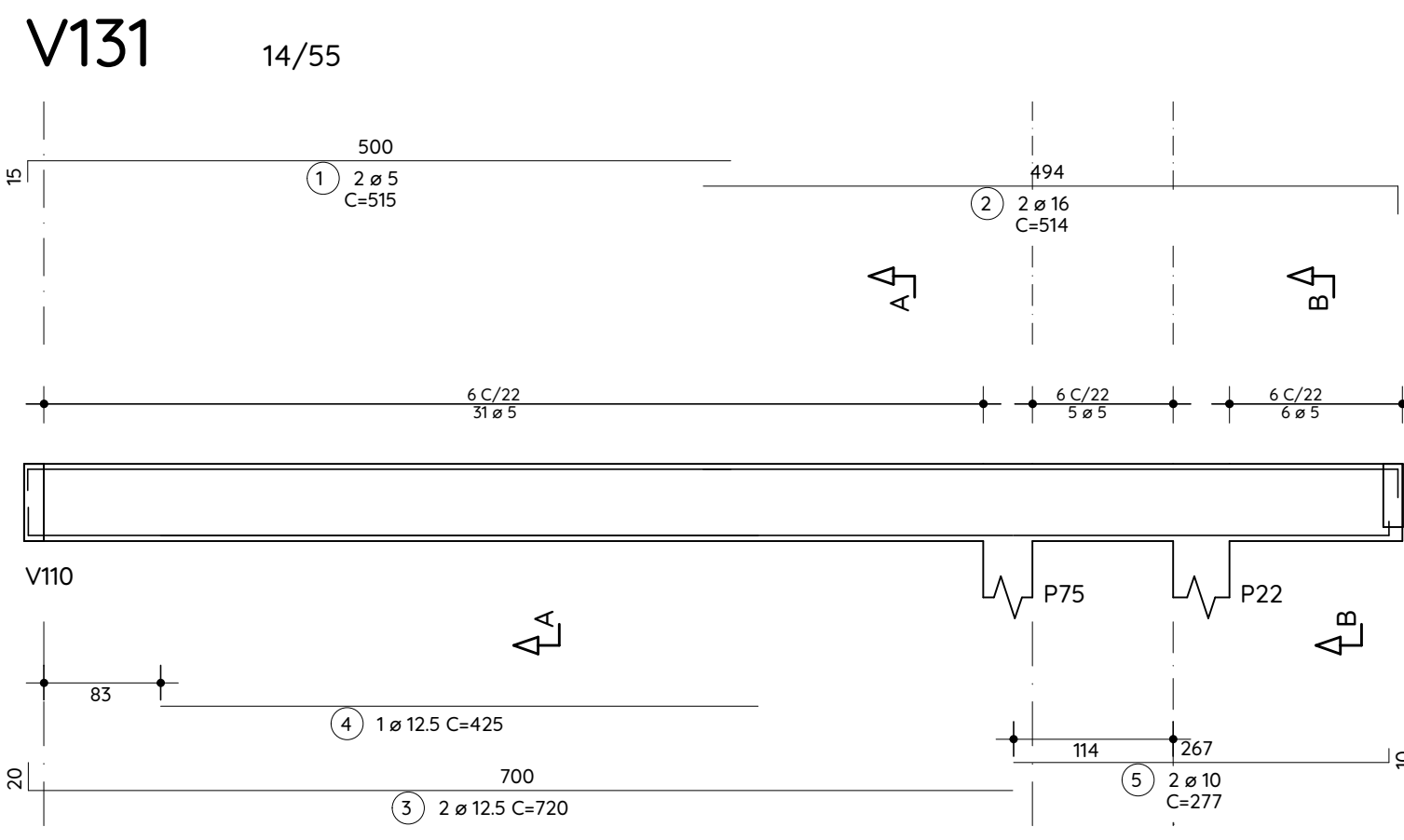
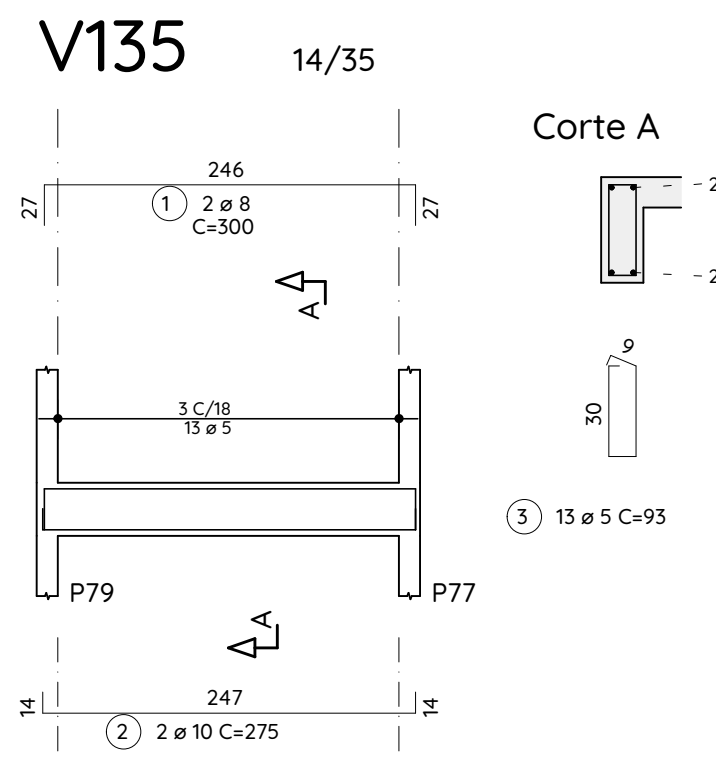
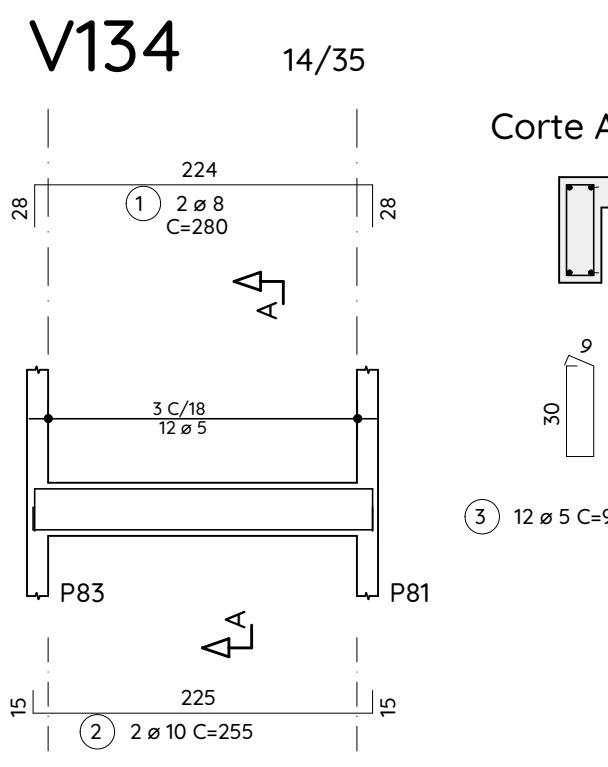
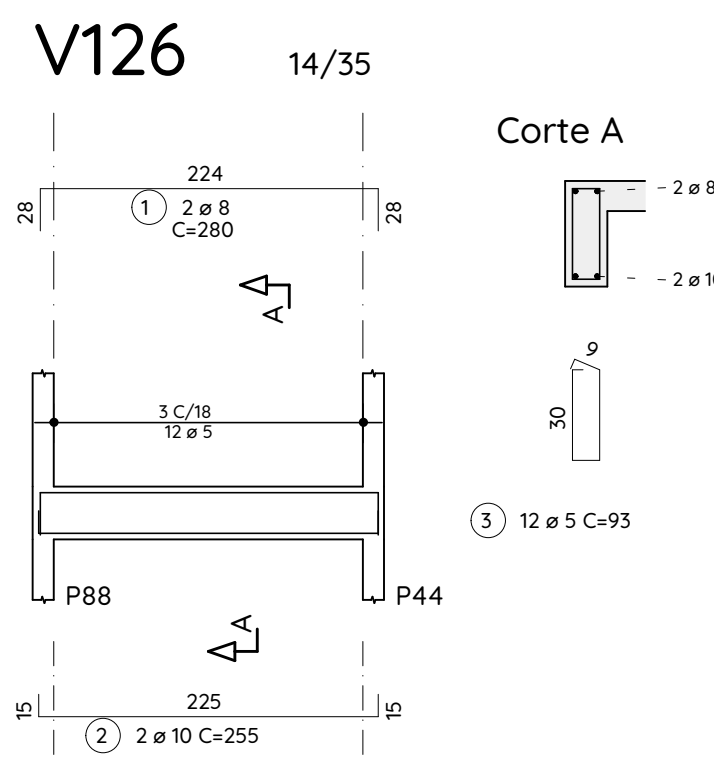
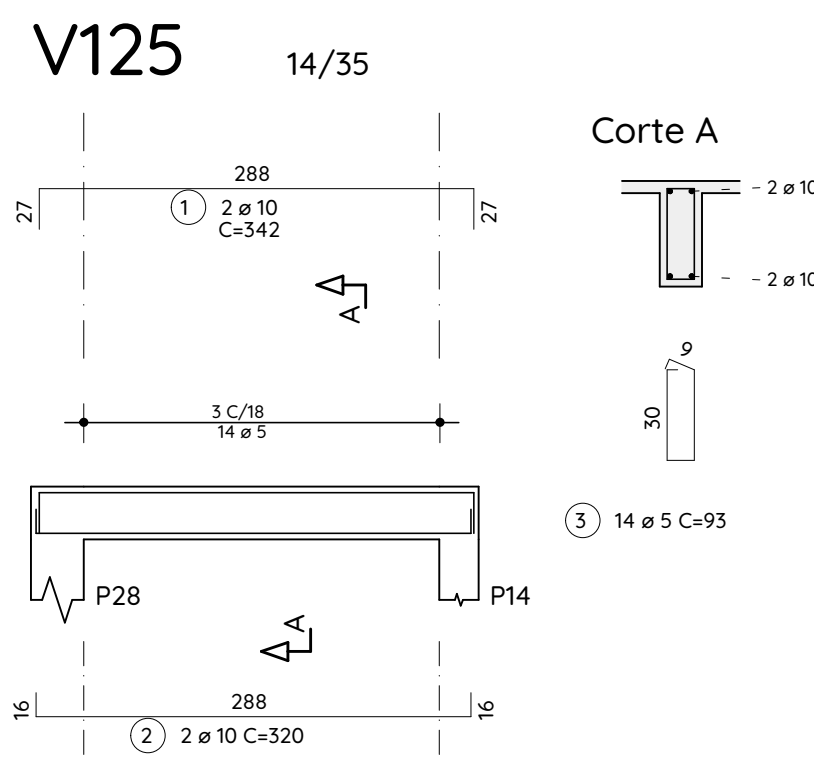
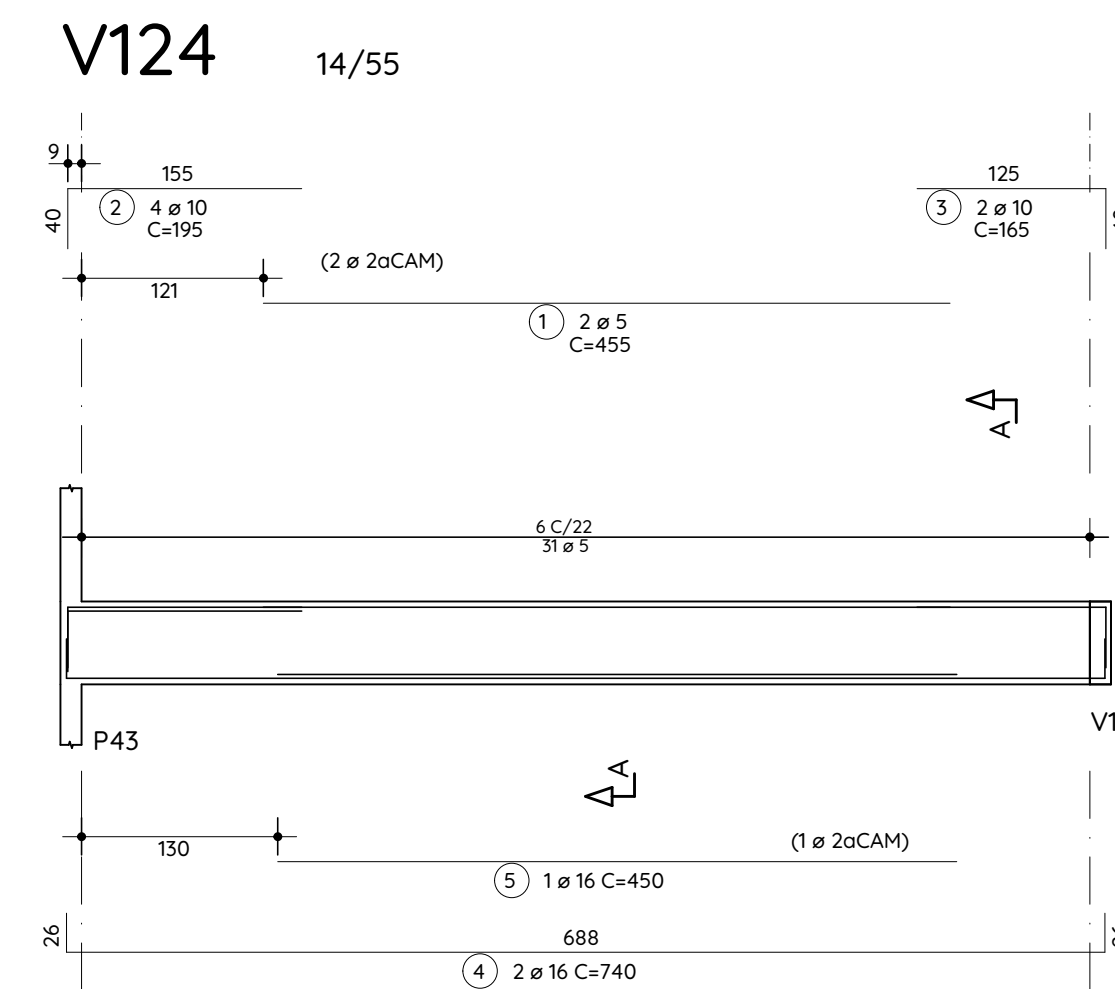
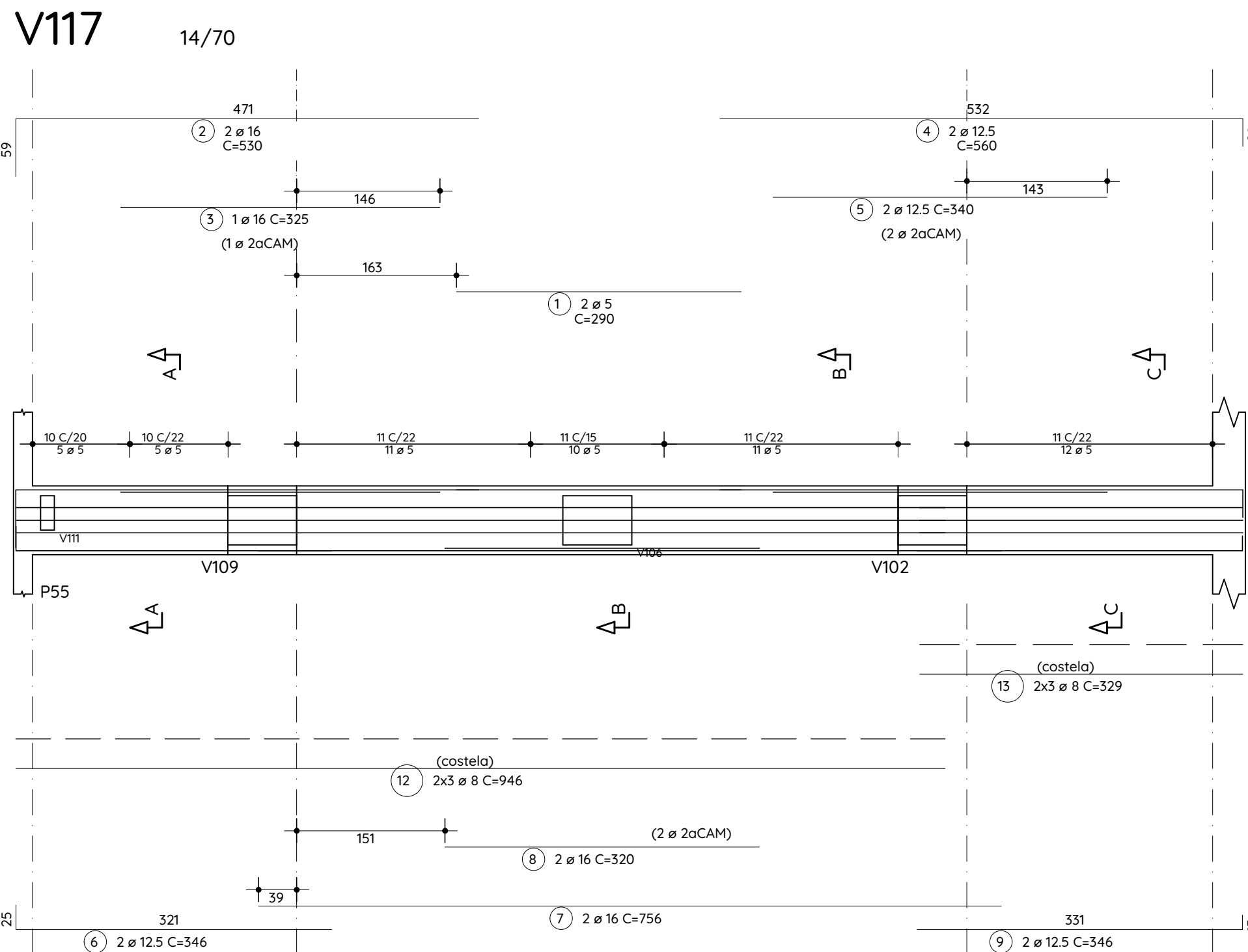
APROVADO: 05/05/2023

REVISÃO: 00

ESCALA: 1:50

OP23-17-EST-09-R00-COBERTA

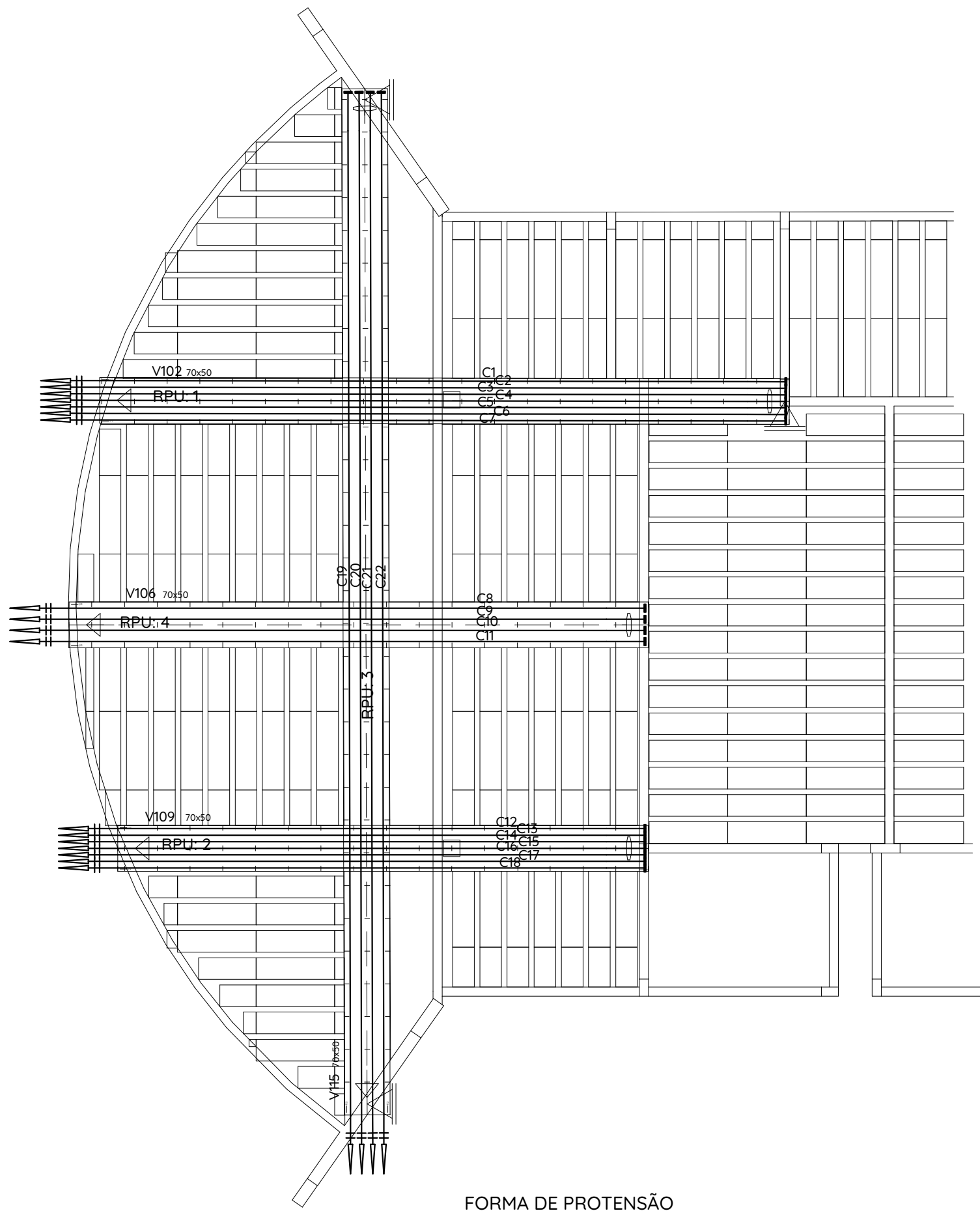
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LAVIO BARBOZA DE LIMA PL OP23-17-EST-13-R00-COBERTA.....PLT 06/05/2023 09:19:34

Assinado eletronicamente por RODRIGO EVARISTO DE OLIVEIRA E SILVA, ANALISTA JUD. ESPECIALIZADO, em 28/09/2023 20:31:06

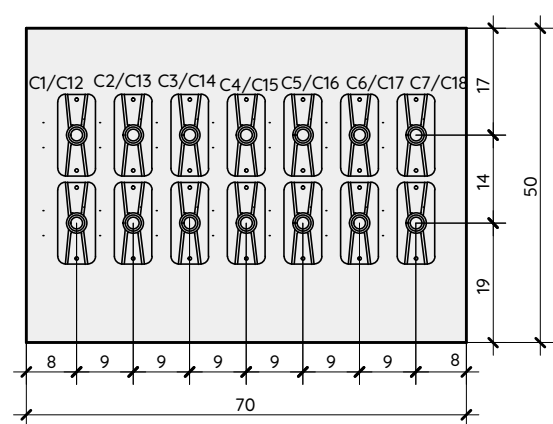
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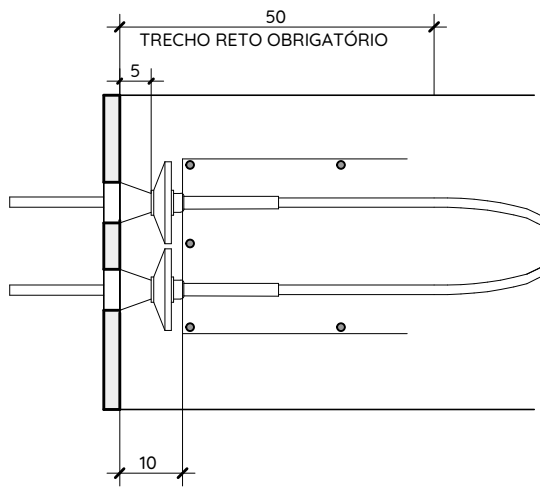
FORMA DE PROTENSÃO

V102 = V109 - ANCORAGENS

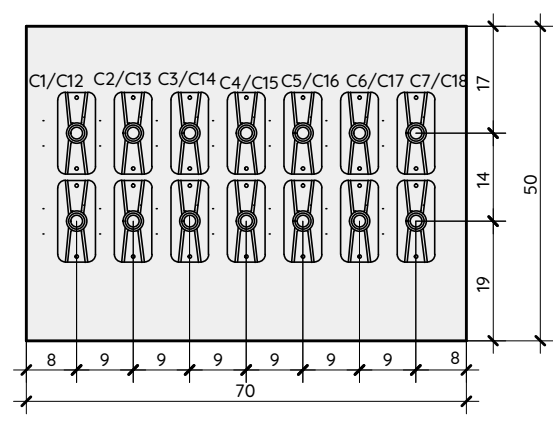
2X



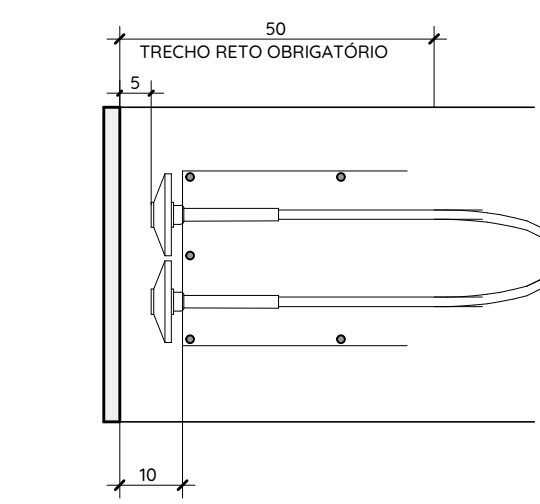
ANCORAGEM ATIVA



ANCORAGEM PASSIVA

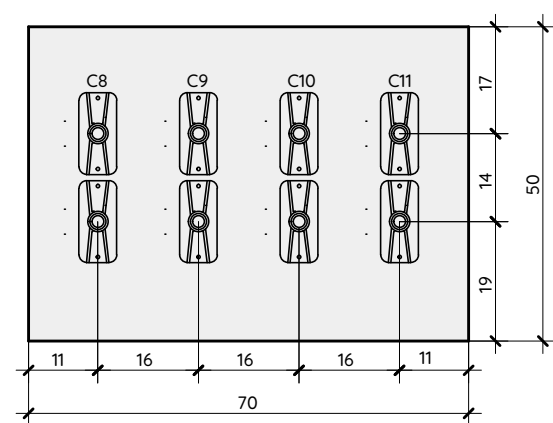


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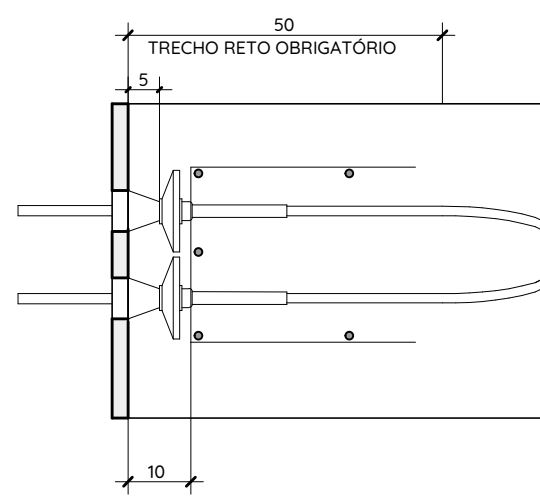


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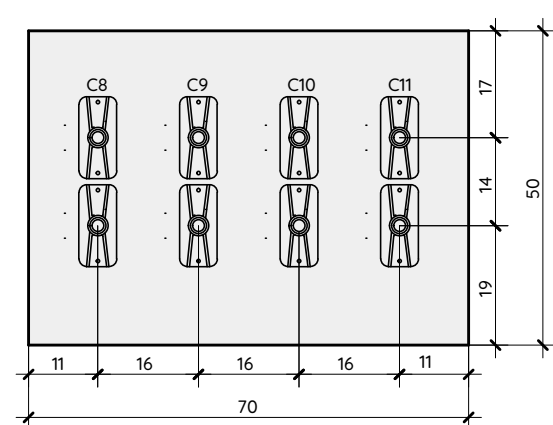
V106 - ANCORAGENS



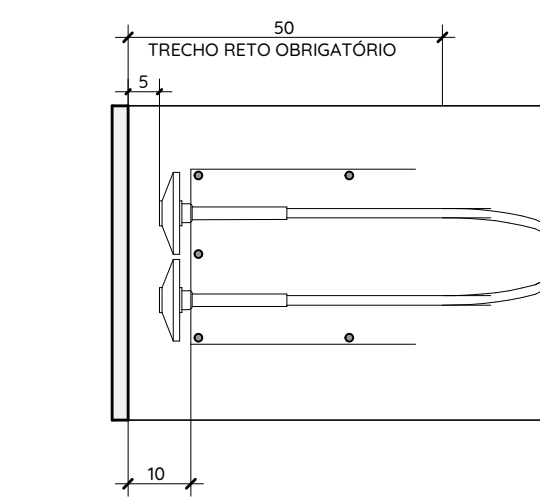
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ANCORAGEM PASSIVA



ANCORAGEM ATIVA

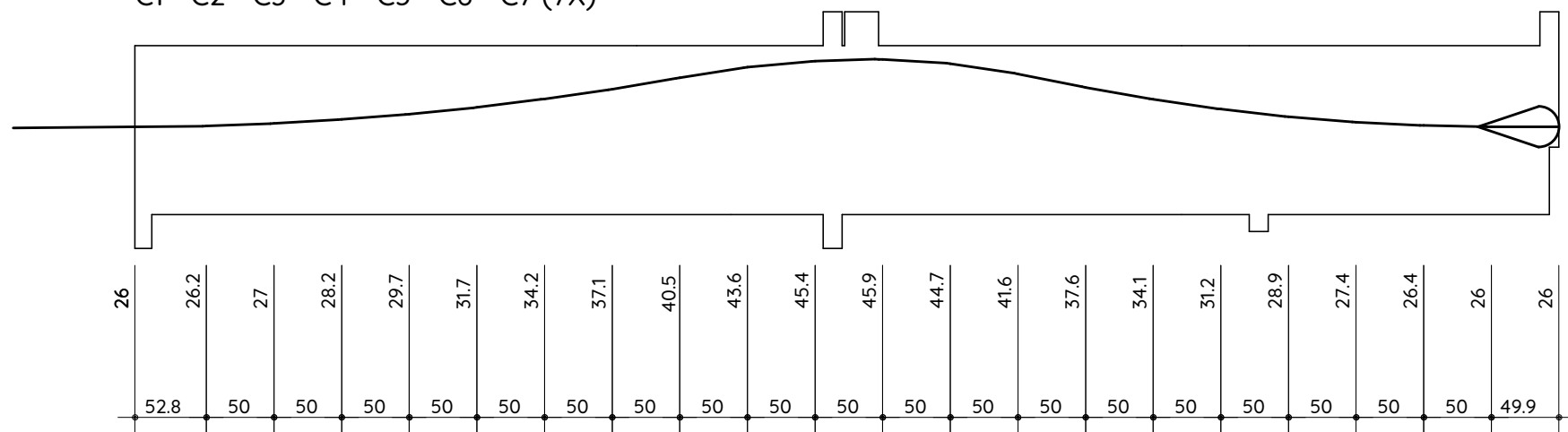


ANCORAGEM PASSIVA

Elevação dos cabos longitudinais (cm)

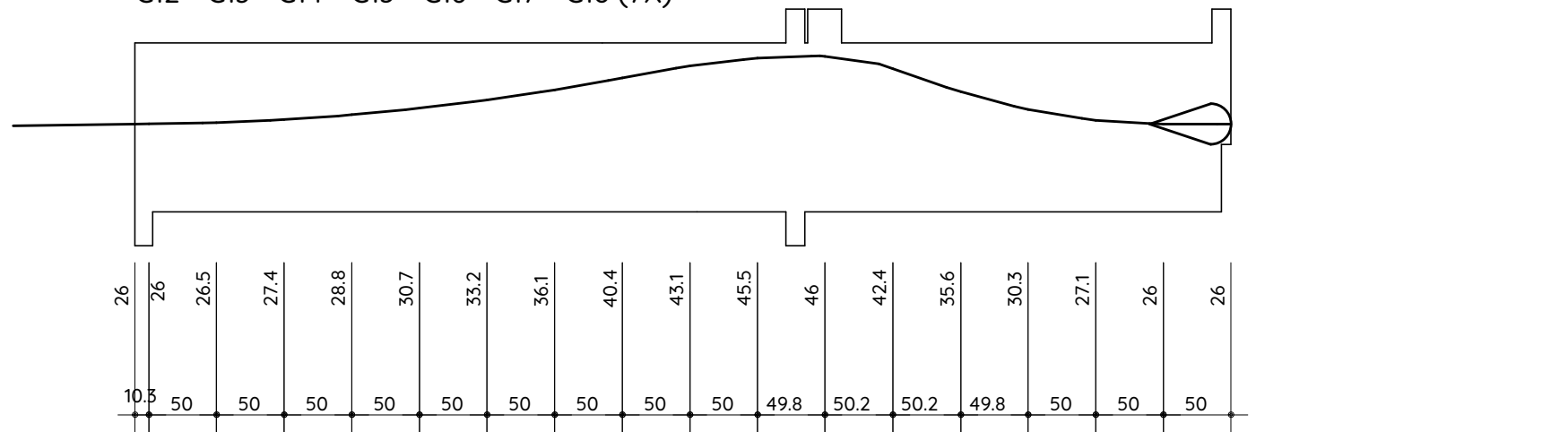
V102

C1 - C2 - C3 - C4 - C5 - C6 - C7 (7X)



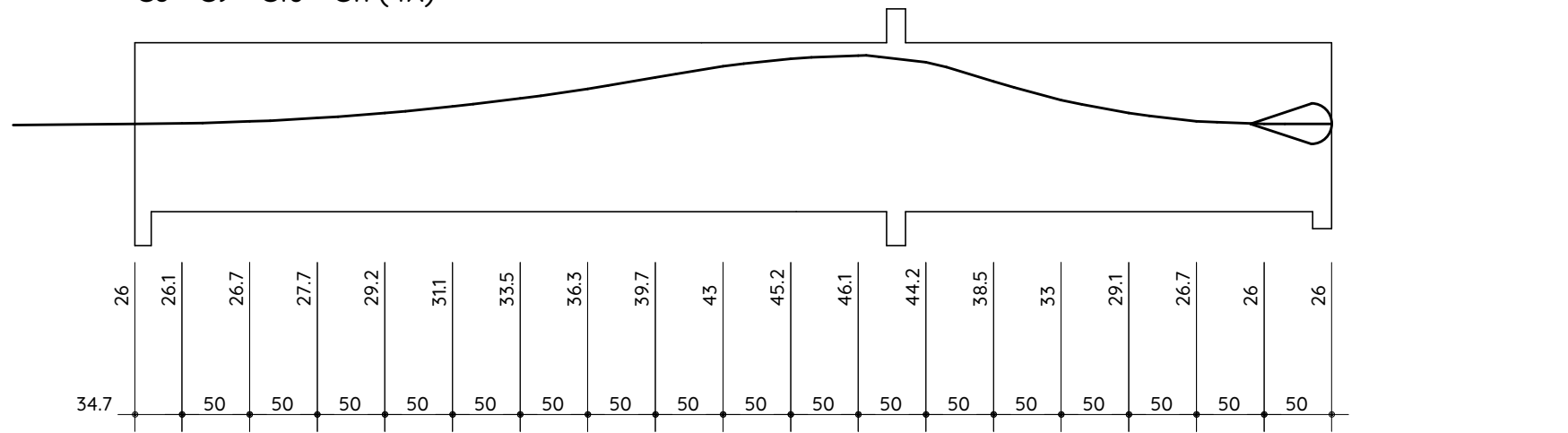
V109

C12 - C13 - C14 - C15 - C16 - C17 - C18 (7X)



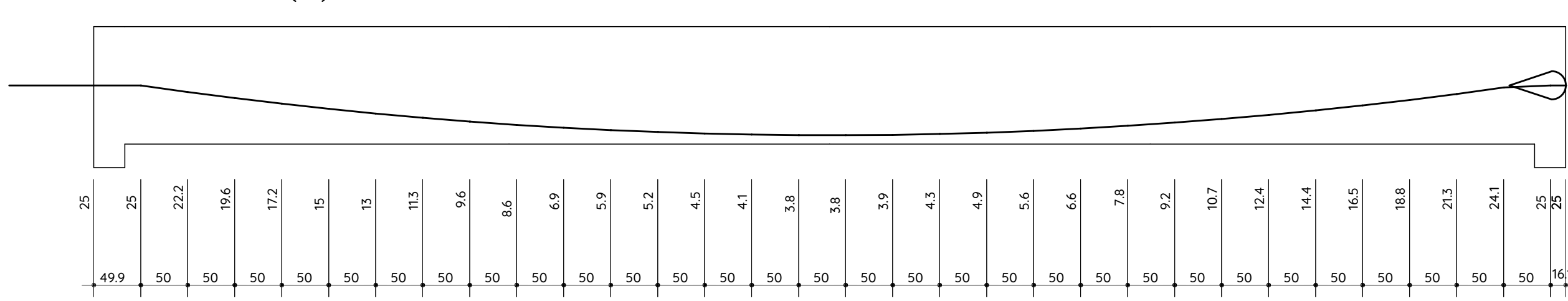
V106

C8 - C9 - C10 - C11 (4X)

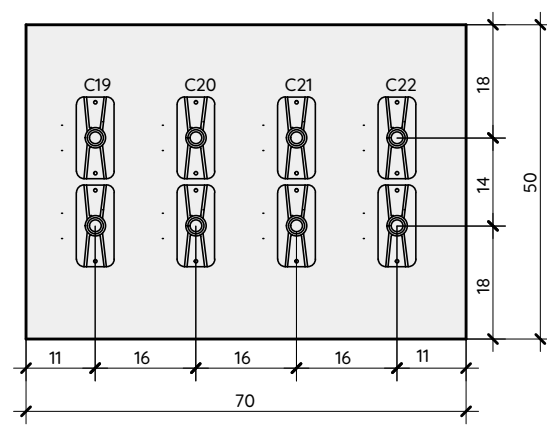


V115

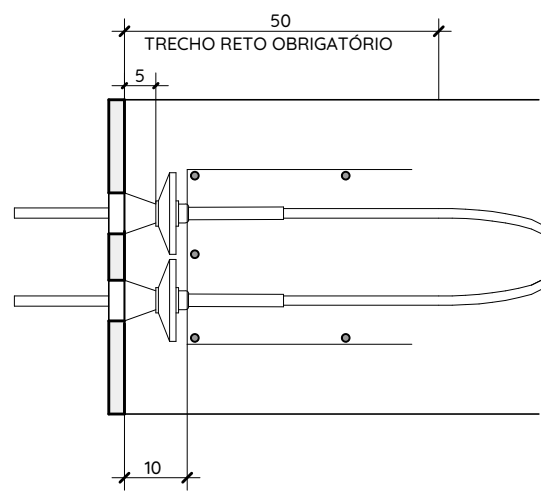
C19 - C20 - C21 - C22 (4X)



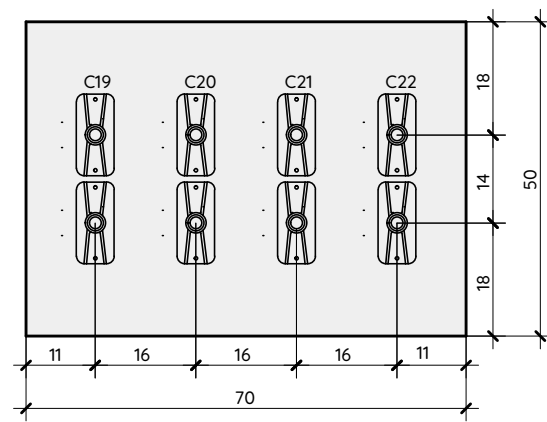
V115 - ANCORAGENS



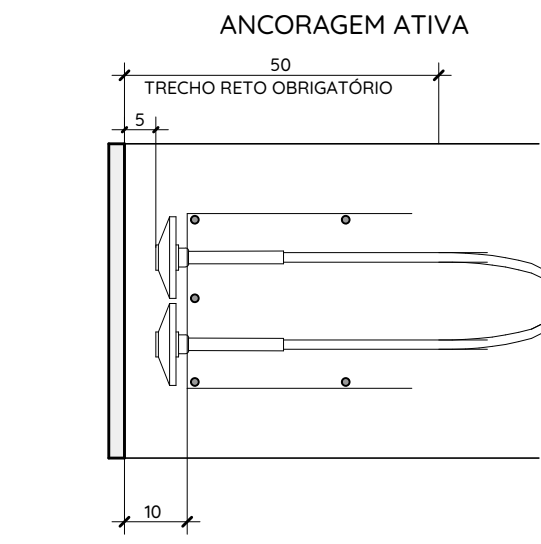
ANCORAGEM ATIVA



ANCORAGEM PASSIVA



ANCORAGEM ATIVA



ANCORAGEM PASSIVA

TABELA DE FERROS				
POS	BIT (mm)	QUANT	UNIT (cm)	TOTAL (cm)
V102 = V109 - ANCORAGENS (X2)				
2	12,5	20	80	1600
3	10	32	102	3264
V106 - ANCORAGENS				
2	12,5	10	80	800
3	10	16	102	1632
V115 - ANCORAGENS				
2	12,5	10	80	800
3	10	16	102	1632
RESUMO AÇO CA50-60				
(*) tabela sem perda de aço				
ACO	BIT (mm)	COMPR	PESO(*)	
50A	10	65	40	
50A	12,5	32	31	
Peso Total	50A =		71 kgf	

PROTENSÃO: AÇO

CP190 RB 12.7 - 12.7

CABO	ø (mm)	Q	COMPRIMENTO (m)		ANCORAGENS			ALONG (mm)	
			UNITÁRIO	TOTAL	A	P	I	INI	FIN
C1 A C7	2 ø 12.7	7	111	155.2	14	14	0	0	67
C8 A C11	2 ø 12.7	4	9.4	75.2	8	8	0	0	55
C12 A C18	2 ø 12.7	7	8.7	121.2	14	14	0	0	50
C19 A C22	2 ø 12.7	4	16.2	129.7	8	8	0	0	102

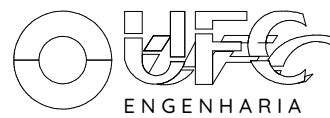
RESUMO DE PROTENSÃO

Monocordalhas não aderentes

ø mm	COMPR m	PESO			ANCORAGENS		
		kgf/m	kgf	kgf+4%	A	P	I
2 ø 12.7	481,30	0.886	326,44	443,50	44	44	

ESPECIFICAÇÃO DA PROTENSÃO

CORDOALHAS 7 FIOS, ENGRAXADAS E PLASTIFICADAS - CP 190 RB - ø12.7mm	
FORÇA DE PROTENSÃO	15 tf
CONCRETO (ATO DA PROTENSÃO)	28 MPa
FATOR ÁGUA/CEMENTO	≤0,45
DATA DA PROTENSÃO	20 DIAS
TOLERÂNCIA DE MEDIDAS	±/-5mm
SEQUÊNCIA DA PROTENSÃO:	
ETAPA ÚNICA, DO CENTRO PARA A EXTREMIDADE ALTERNADAMENTE.	
NICHOS E FRETAGEM:	
DEVEM SER COMPATIBILIZADOS COM OS UTILIZADOS PELA EMPRESA CONTRATADA PARA A EXECUÇÃO.(!)	
ALONGAMENTOS:	
INFORMAR AO CALCULISTA AS MEDIDAS EXECUTADAS NA OBRA	



ESTRUTURAL

FÓRUM DA COMARCA DE CORUIPE

VIGAS PROTENDIDAS ARMADURA ATIVA
V102--V102--V109-V115
ANCORAGENS

PROJETADO: FELIPE LIMA
05/05/2023
DESENHADO: F. LIMA
05/05/2023

VERIFICADO: 05/05/2023
SUBSTITUI A:

DESENHO: OP23-17-EST-13-R00-COBERTA

DATA: 05/05/2023

OBRA N: 0001

13

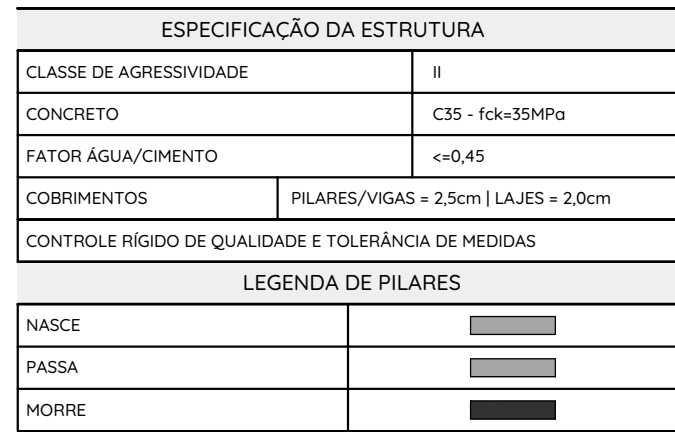
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ESCALA: Indicada

Assinado eletronicamente por **RODRIGO EVARISTO D**
OLIVEIRA E SILVA, ANALISTA JUD. ESPECIALIZAD

28/09/2023 20:31:06

Para conferir a autenticidade do documento acesse o endereço <https://grp.tja>



DATA	01/05/2023
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0001

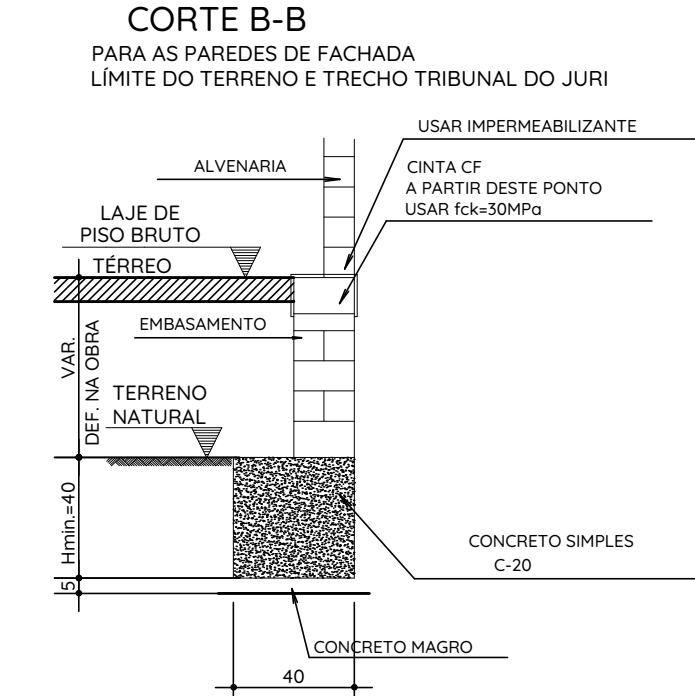
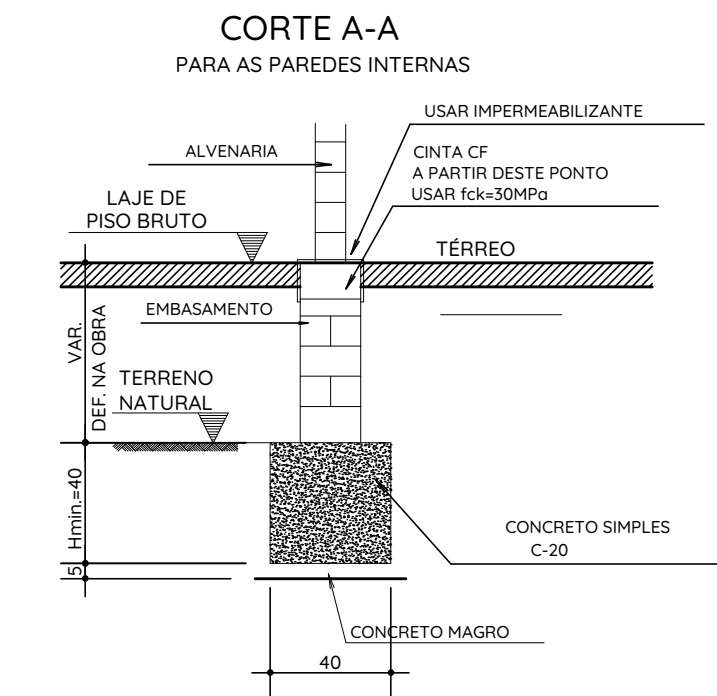
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REV. N. 00

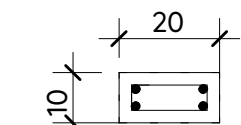
ESCALA
1:75

TABELA DE FERROS					
	POS	BIT (mm)	QUANT	UNIT (cm)	TOTAL (cm)
CF	1	6,3	168	986	165648
	2	5	2761	95	191165
RESUMO AÇO CA50-60					
(*) tabela sem perda de aço					
	AÇO	BIT (mm)	COMPR (m)	PESO(*) (kg)	
	60B	5	1519	234	
	50A	6,3	1656	406	
Peso Total 60B =				234 kgf	
Peso Total 50A =				406 kgf	

DETALHAMENTO DAS FUNDAÇÕES CORRIDAS



CF

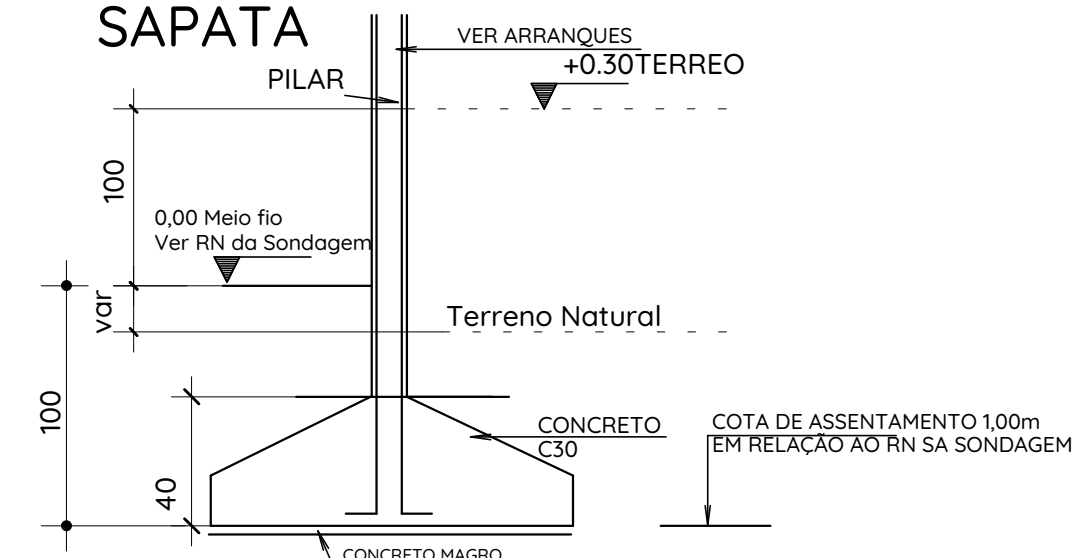


② 2761 Ø 5 C/15 C=55

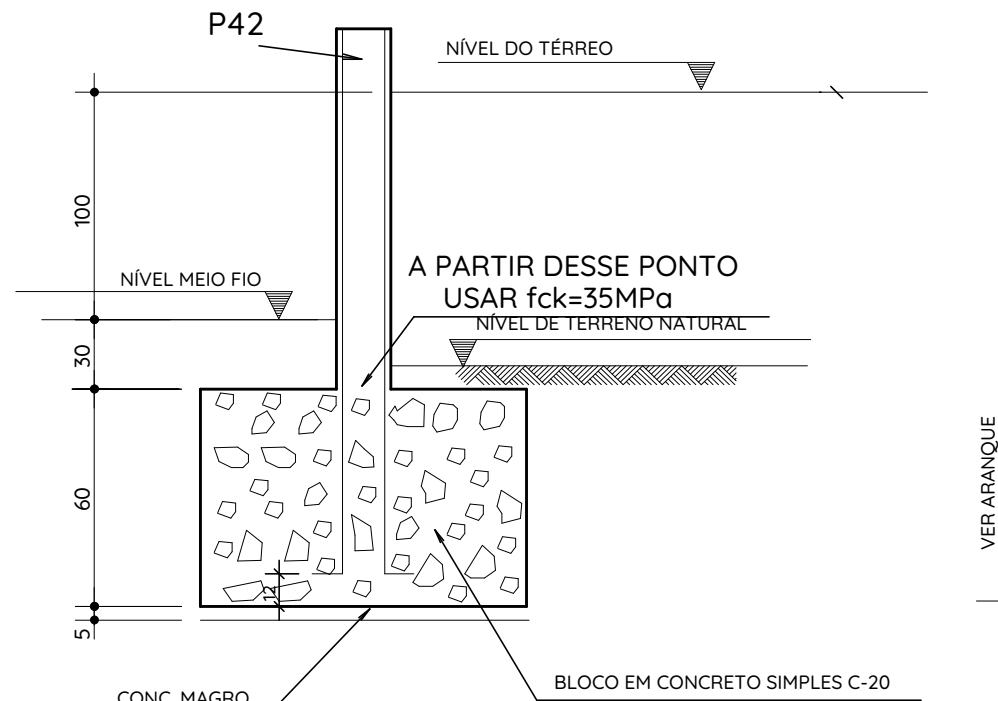
• (N1) 4 ø 6.3

① 42x4 ø 6.3 C=986

DETALHE TÍPICO
SAPATA



DETALHE BLOCO DE FUNDAÇÃO



ESPECIFICAÇÃO DA ESTRUTURA	
CLASSE DE AGRESSIVIDADE	II
CONCRETO	C35 - fck=35MPa
FATOR ÁGUA/CEMENTO	≤0,45
COBRIMENTOS	PILARES/VIGAS = 2,5cm LAJES = 2,0cm
CONTROLE RÍGIDO DE QUALIDADE E TOLERÂNCIA DE MEDIDAS	
LEGENDA DE PILARES	
NASCE	
PASSA	
MORRE	

ESTRUTURAL

FÓRUM DA COMARCA DE CORURIBE

FORMA FUNDAÇÃO
CF

Get on Phone

NUPC

01/05/2023

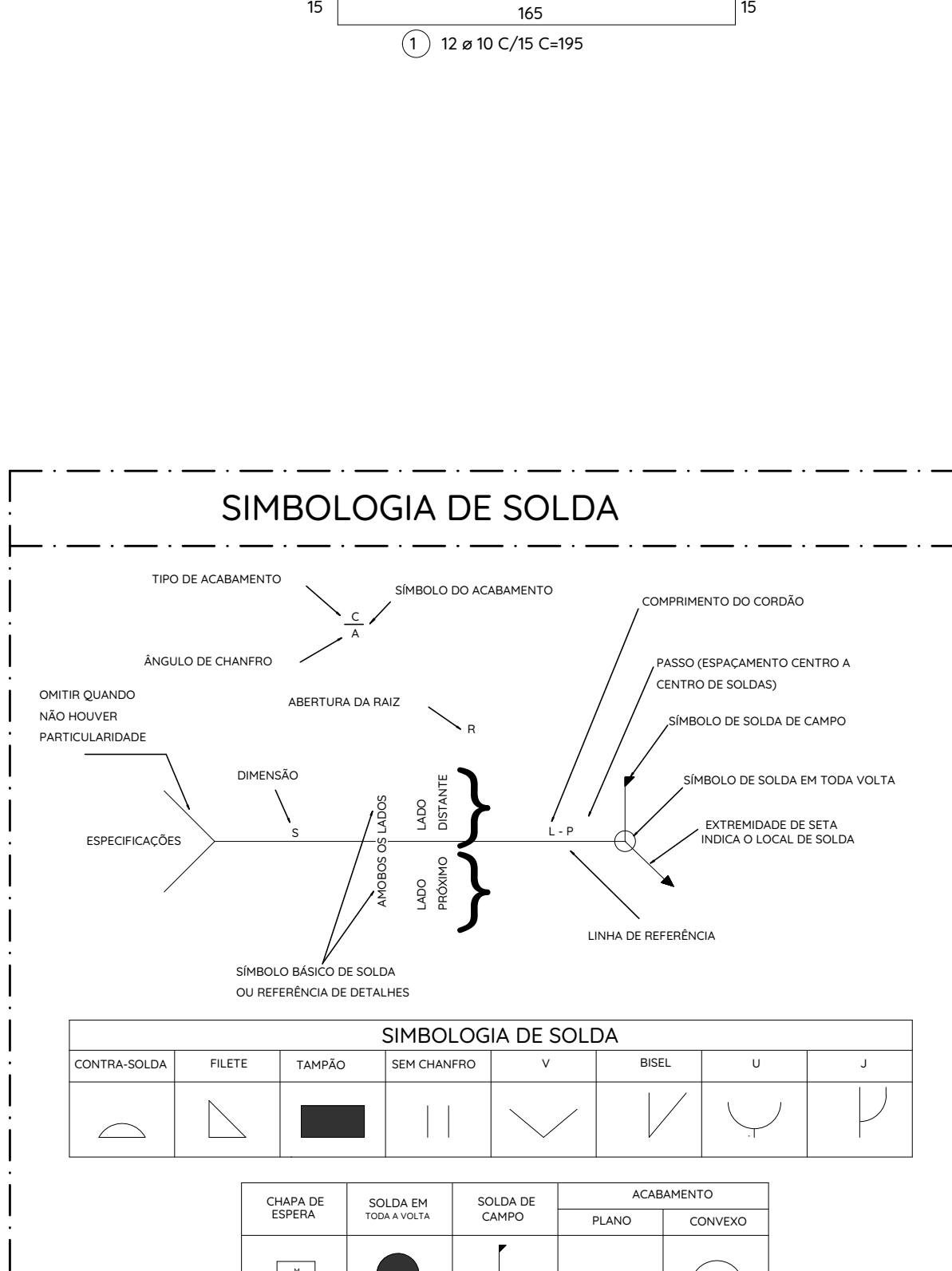
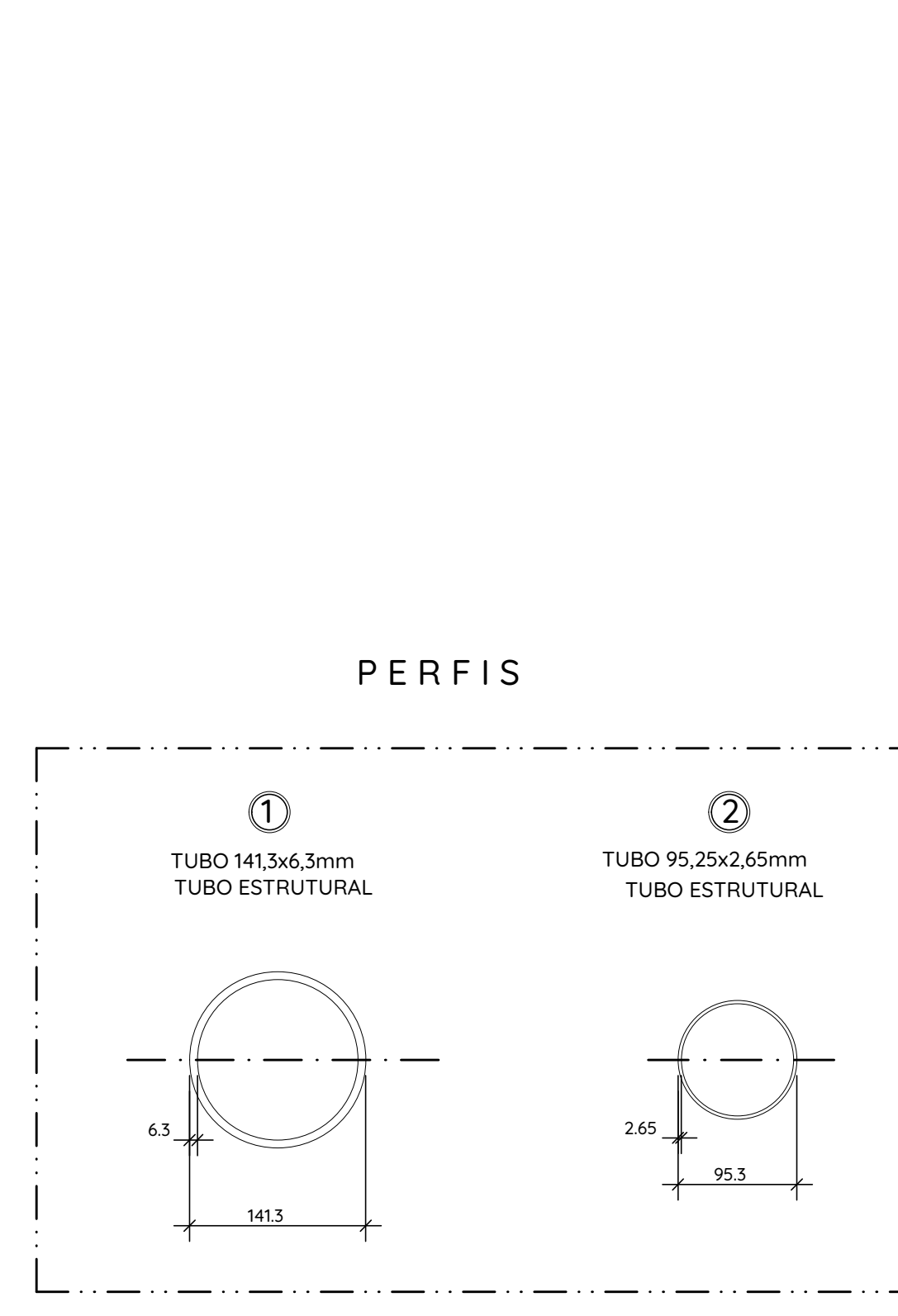
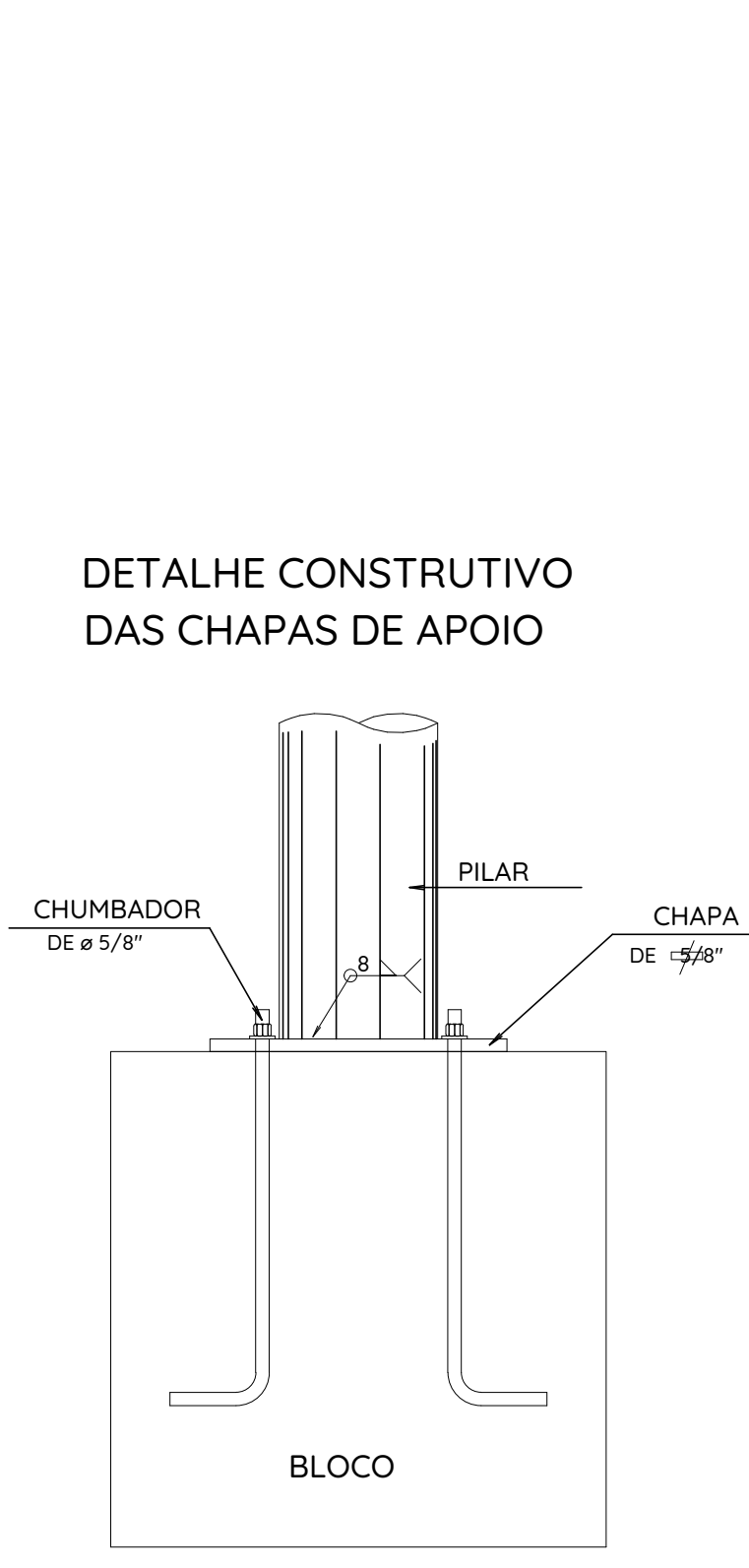
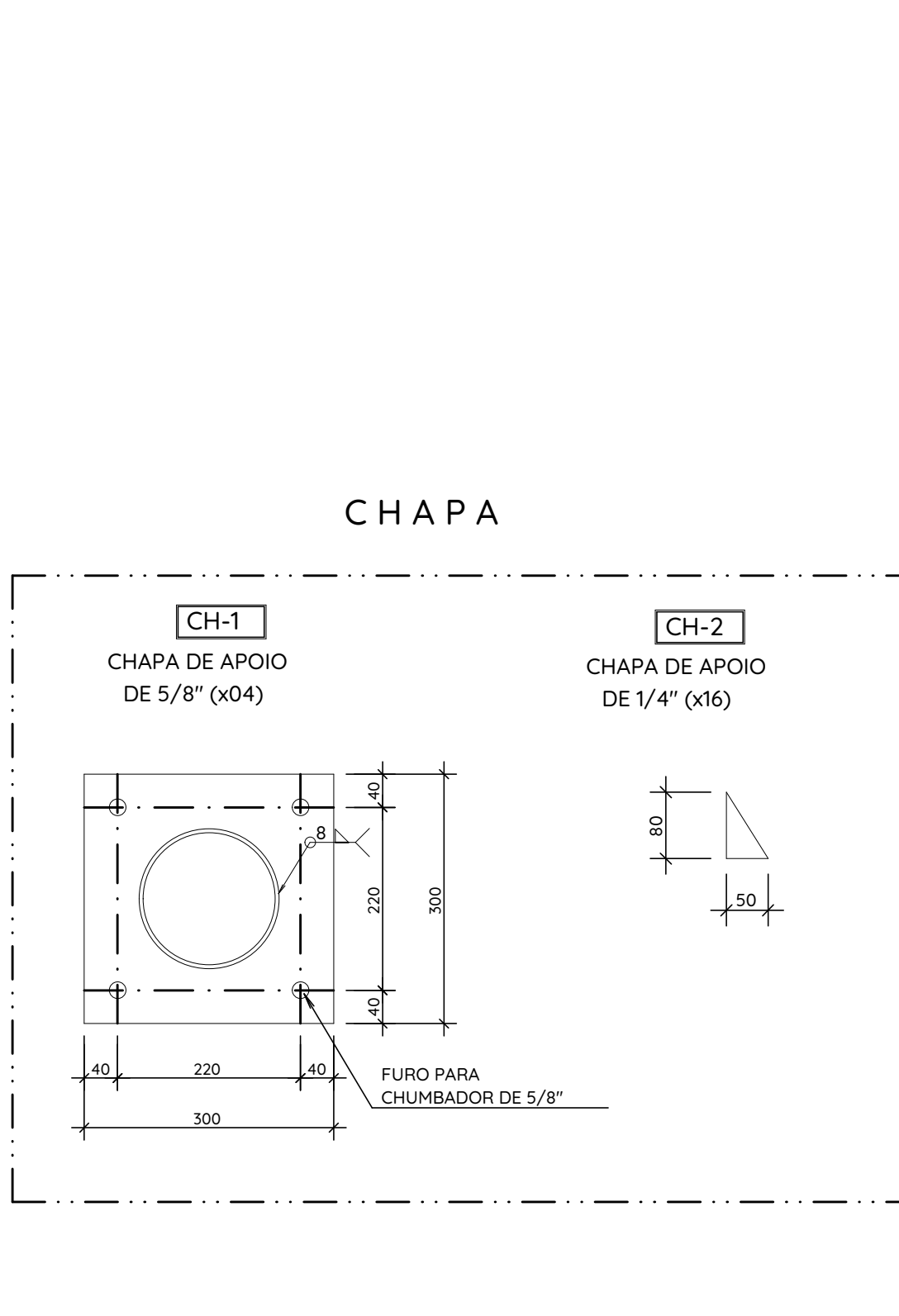
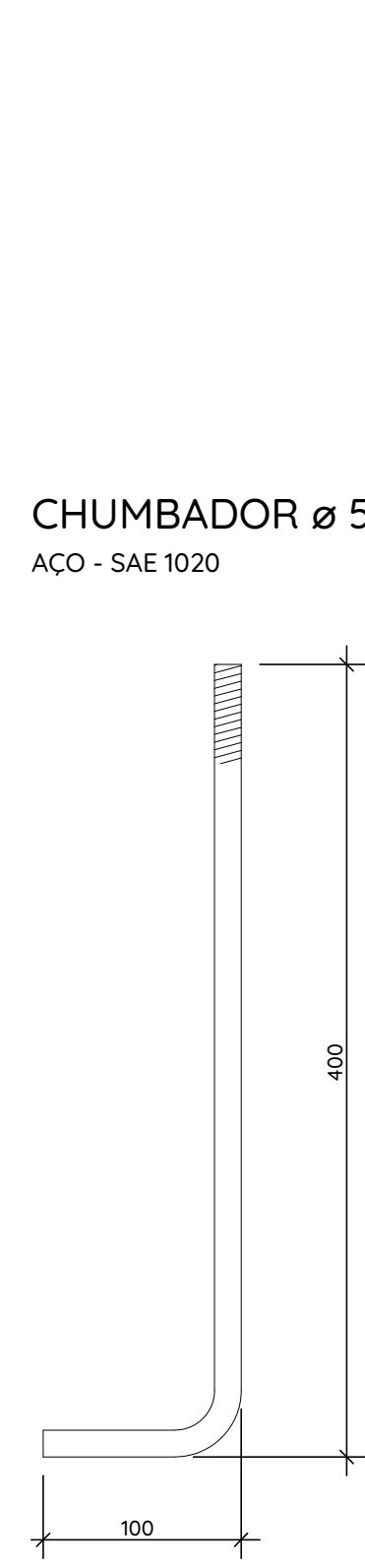
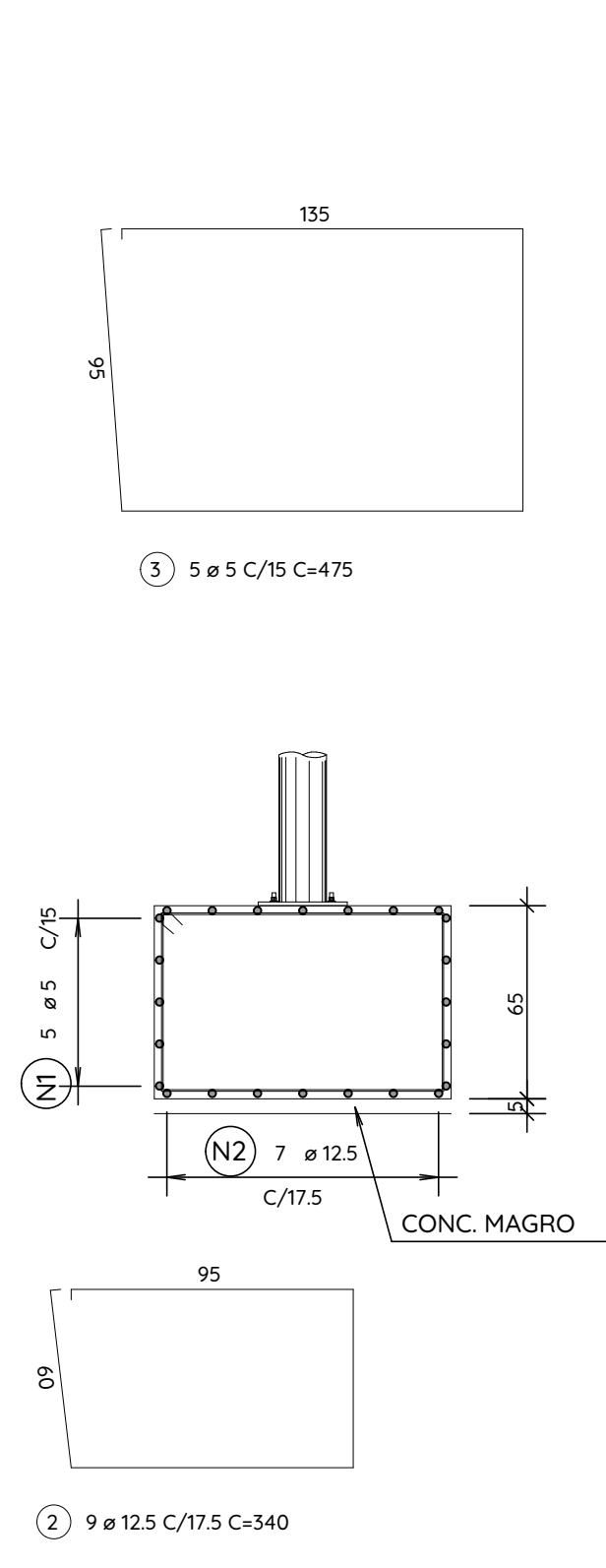
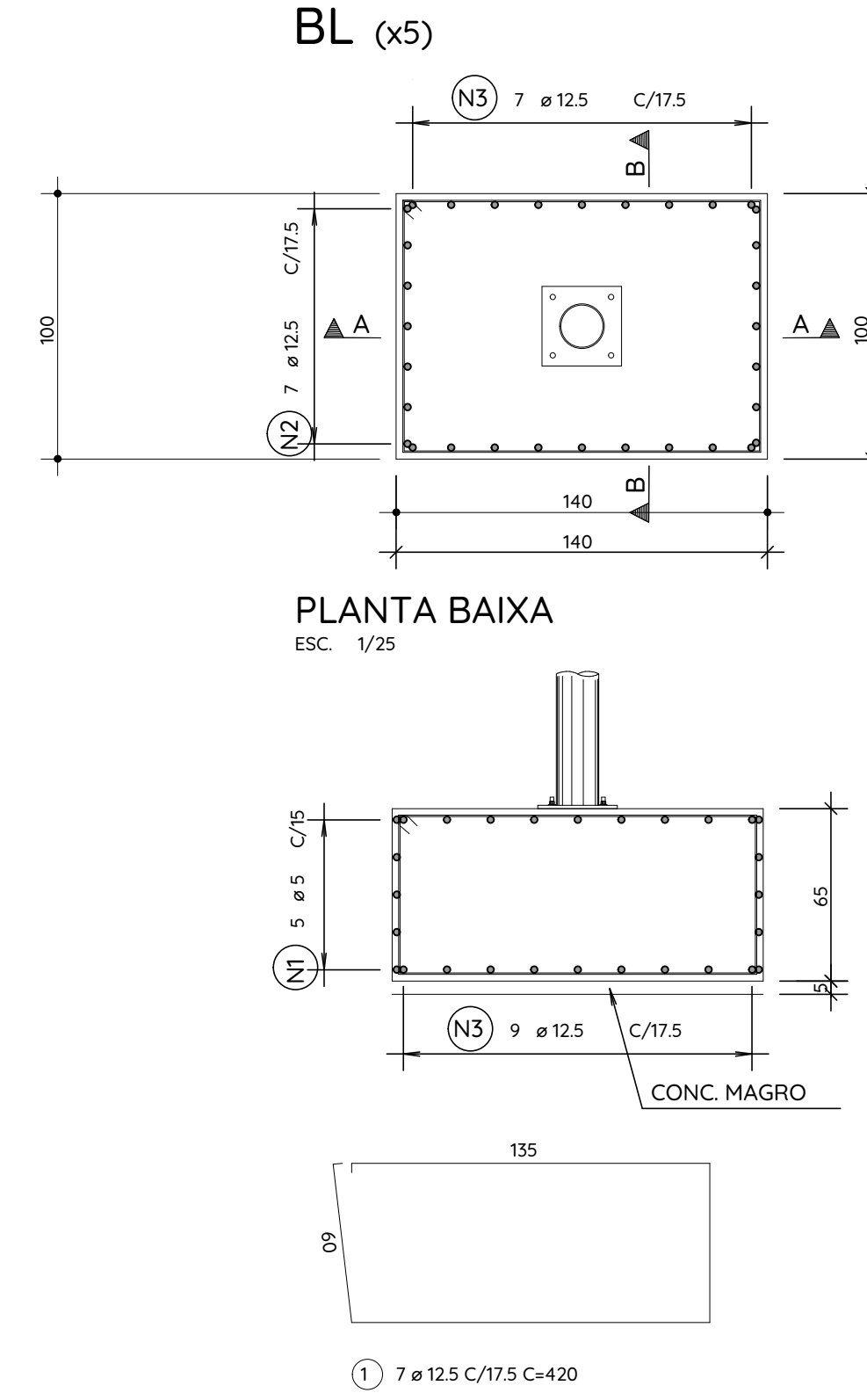
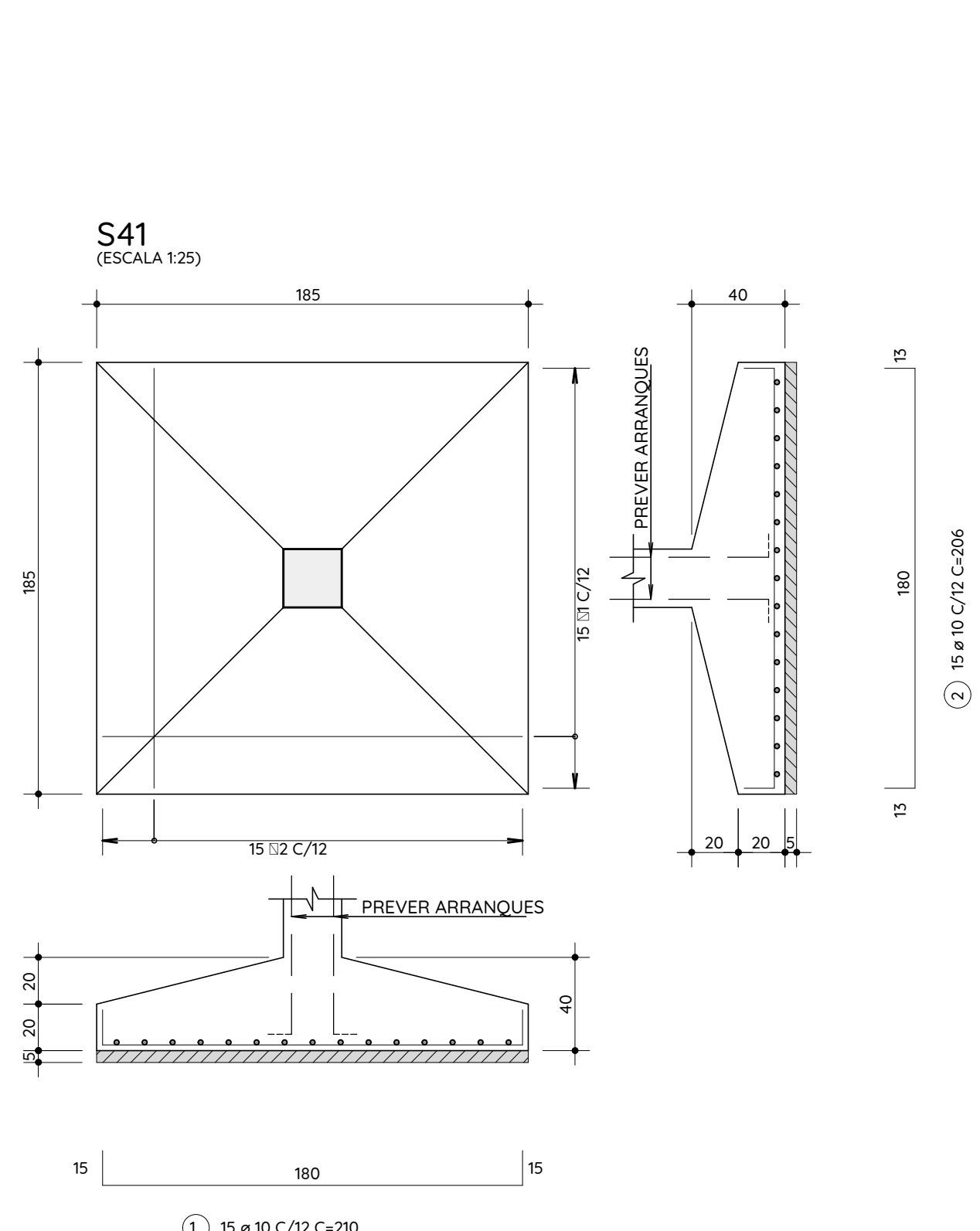
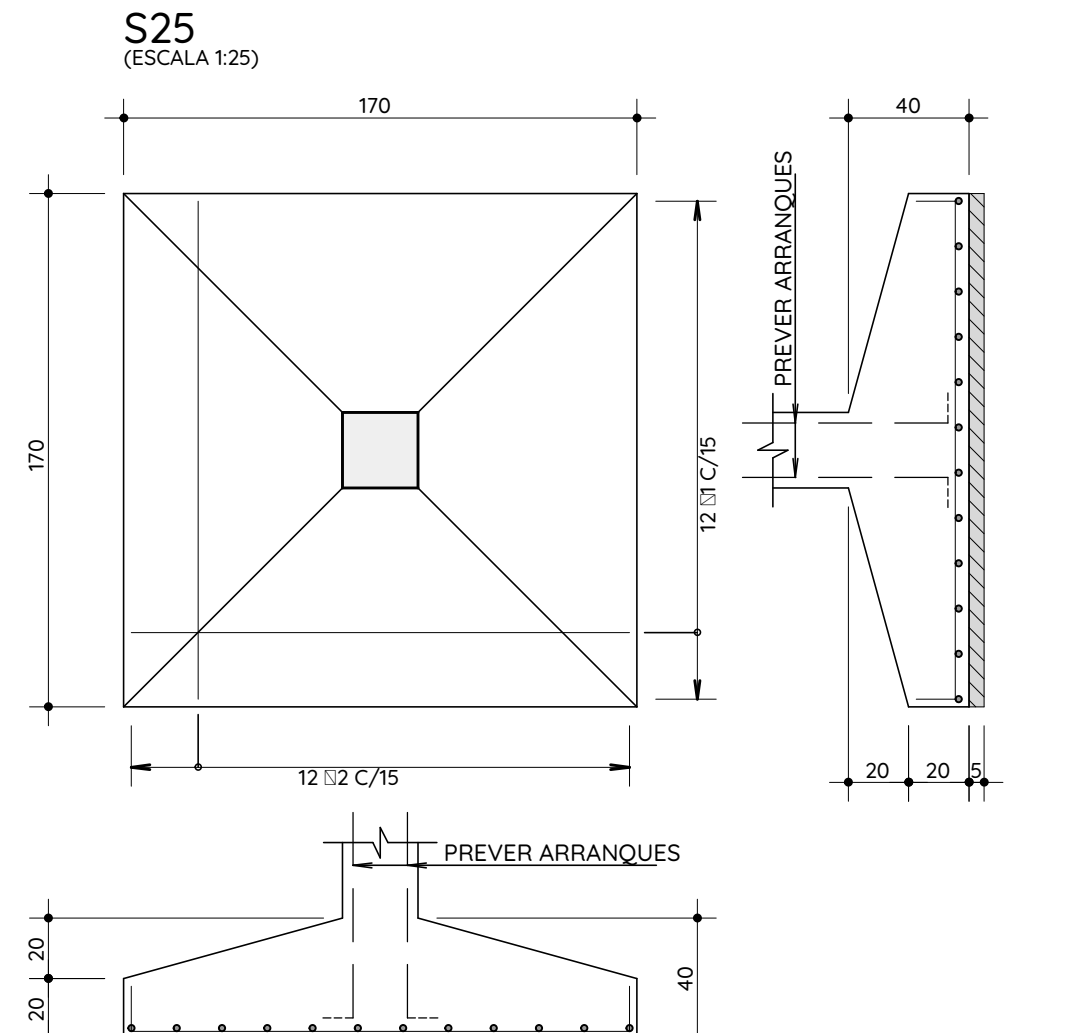
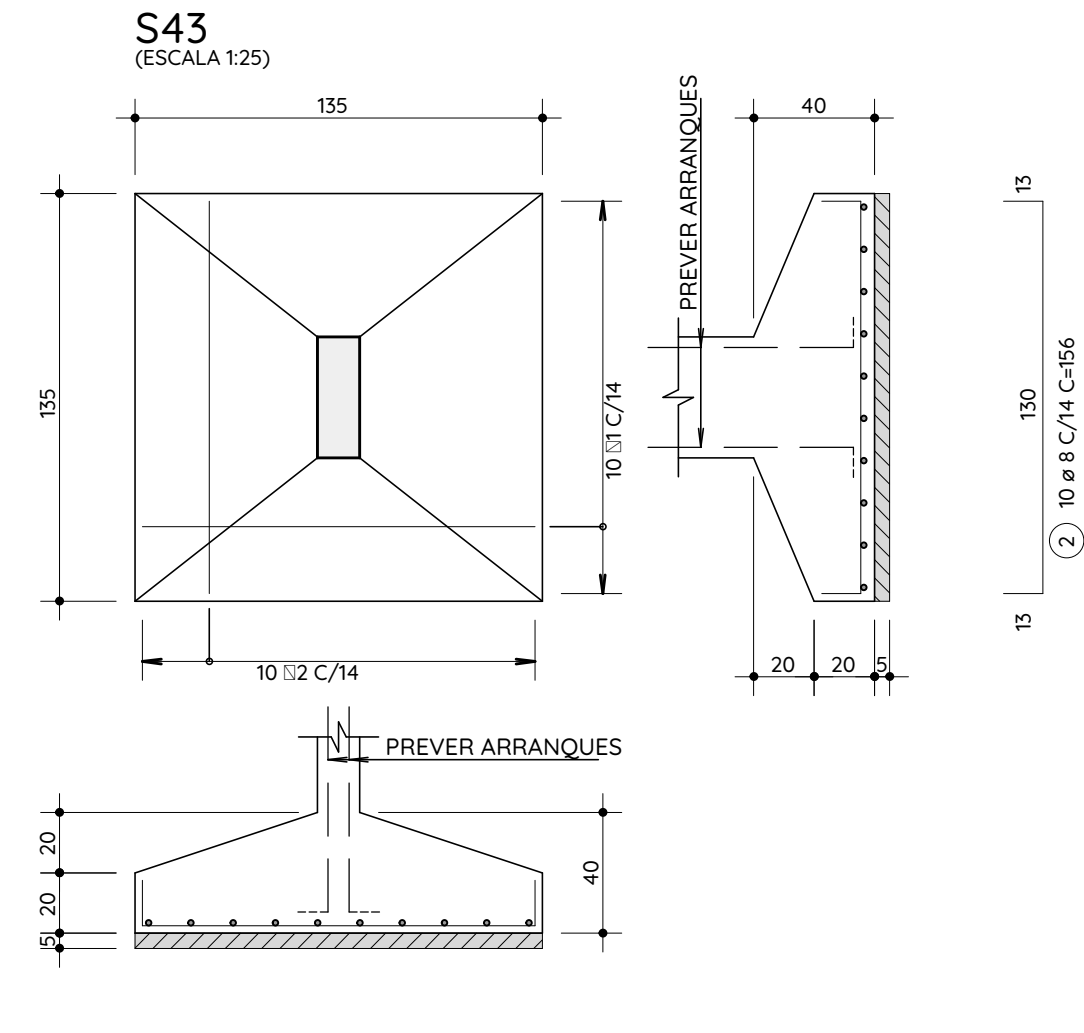
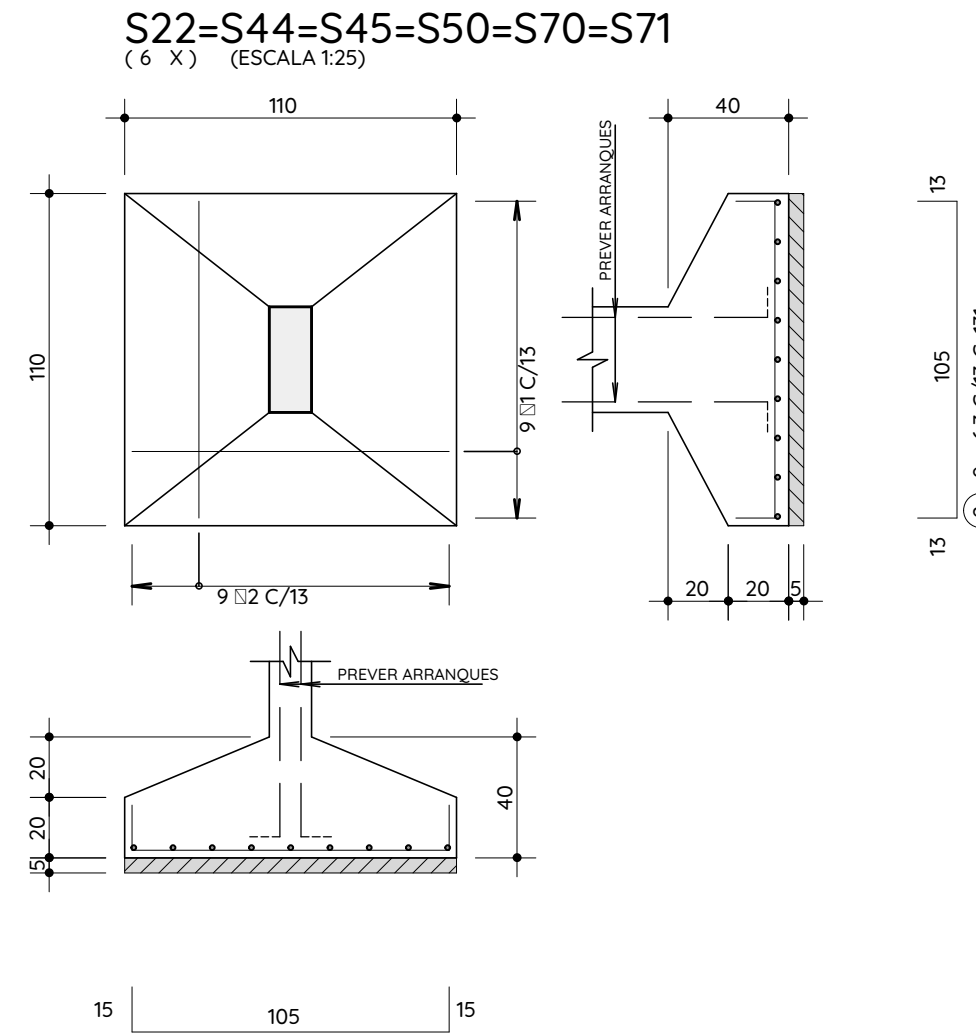
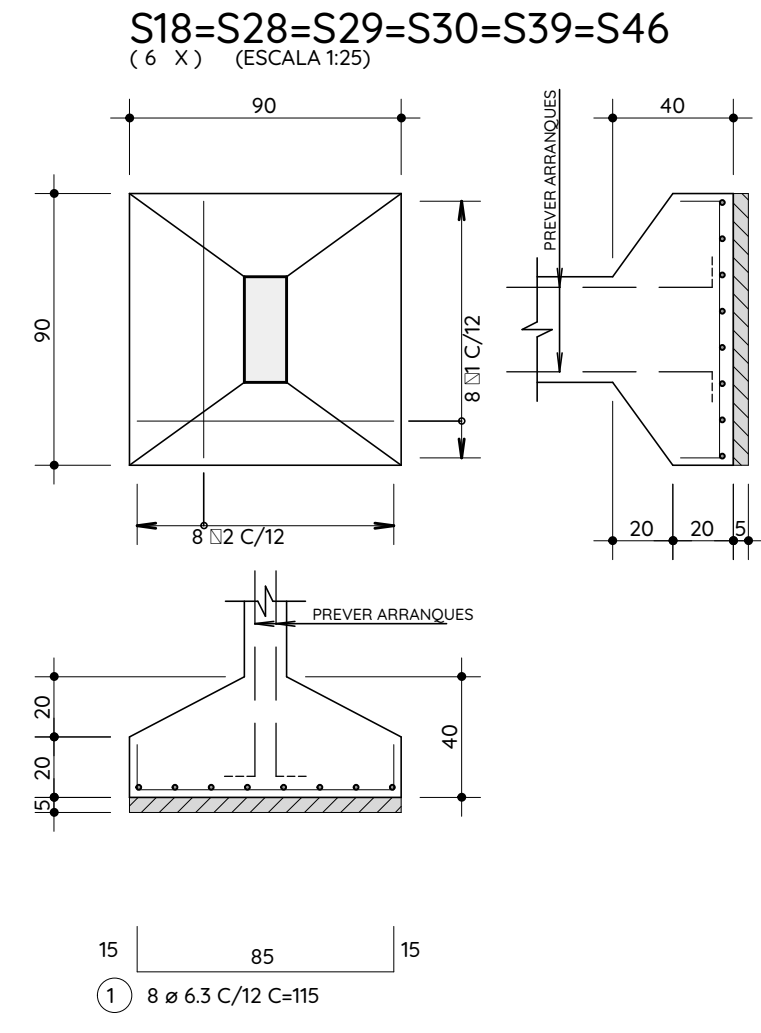
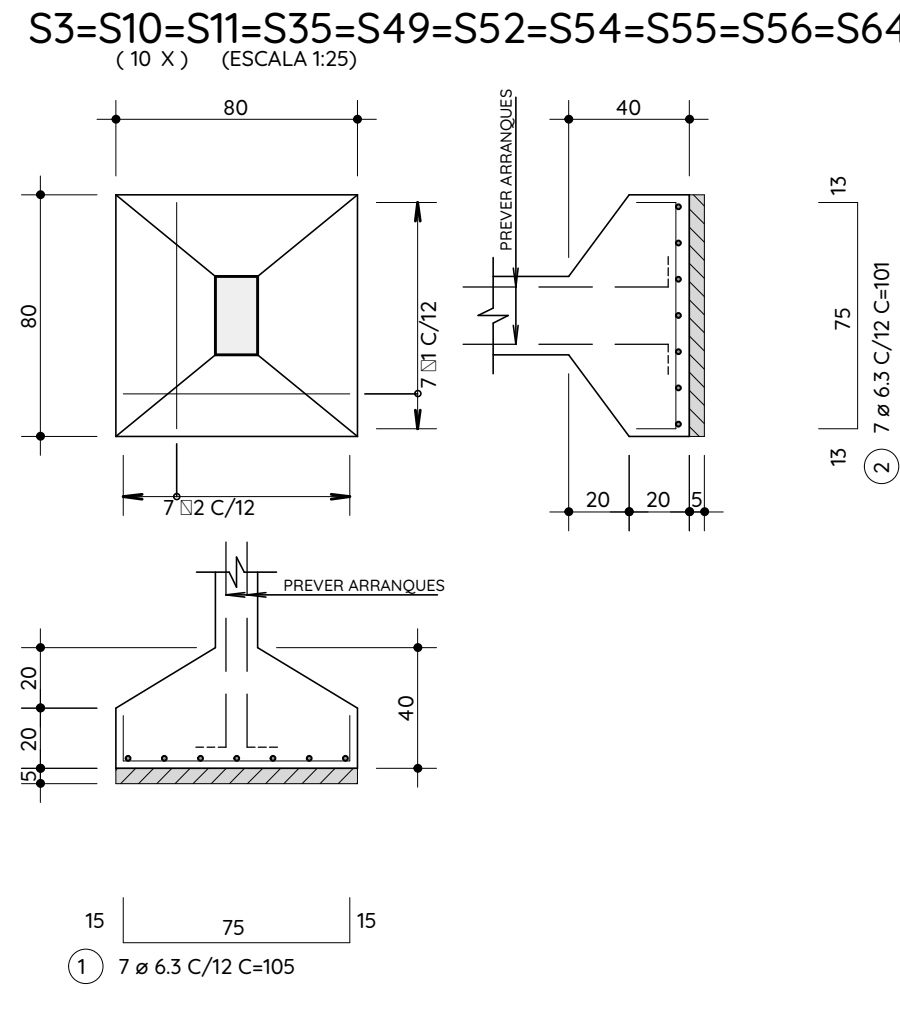
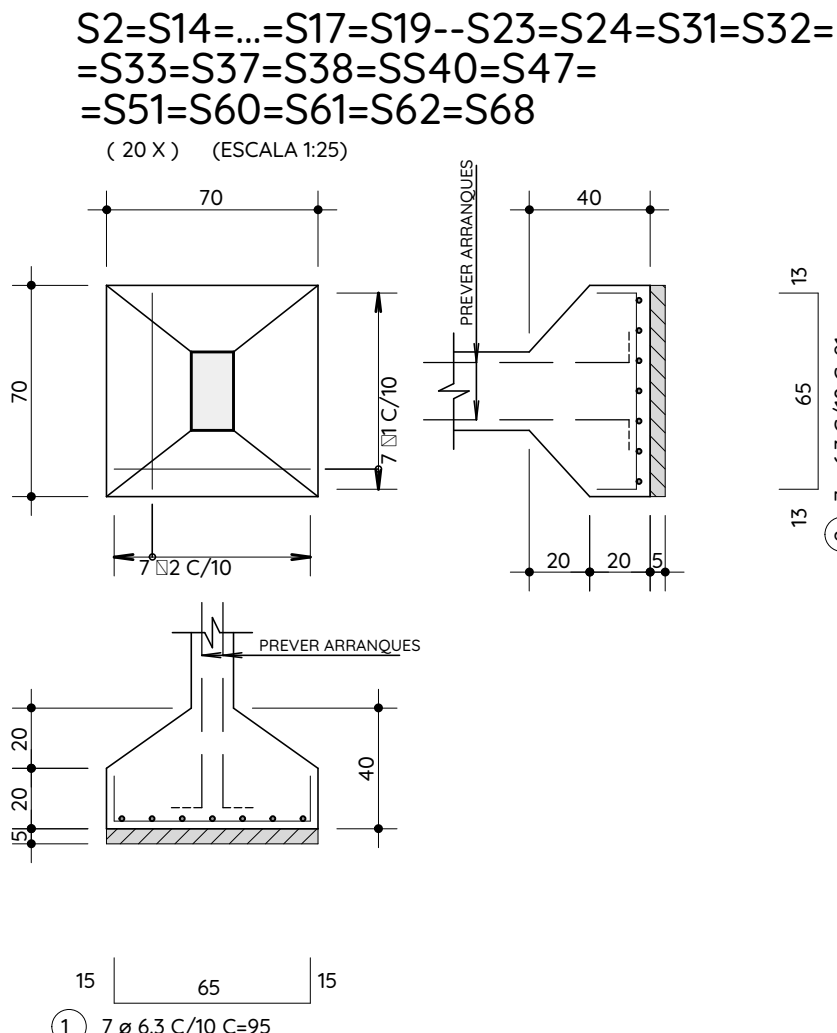
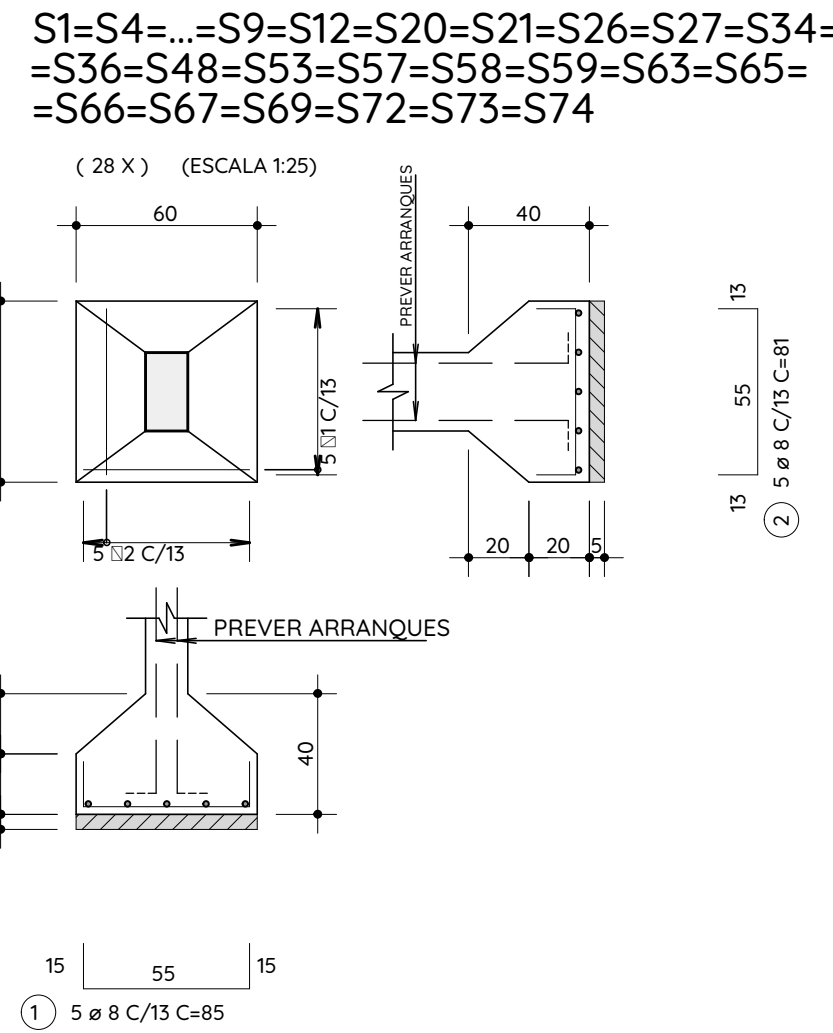
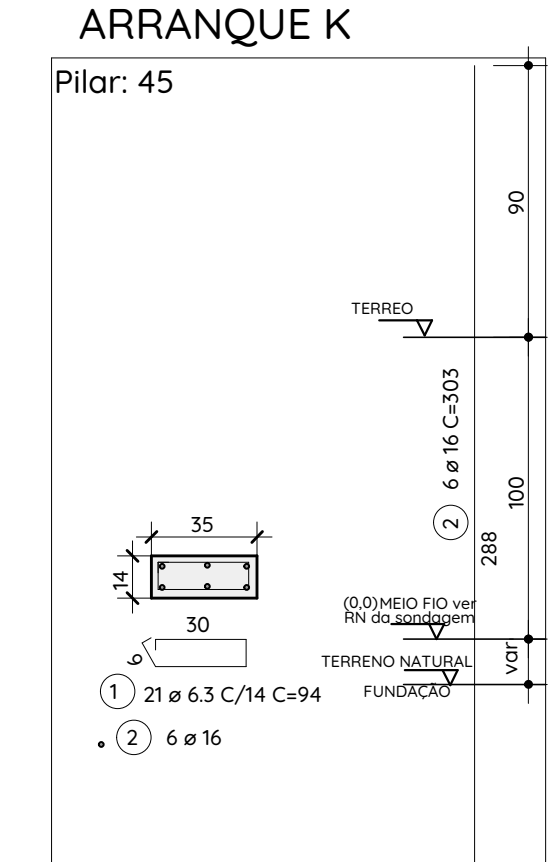
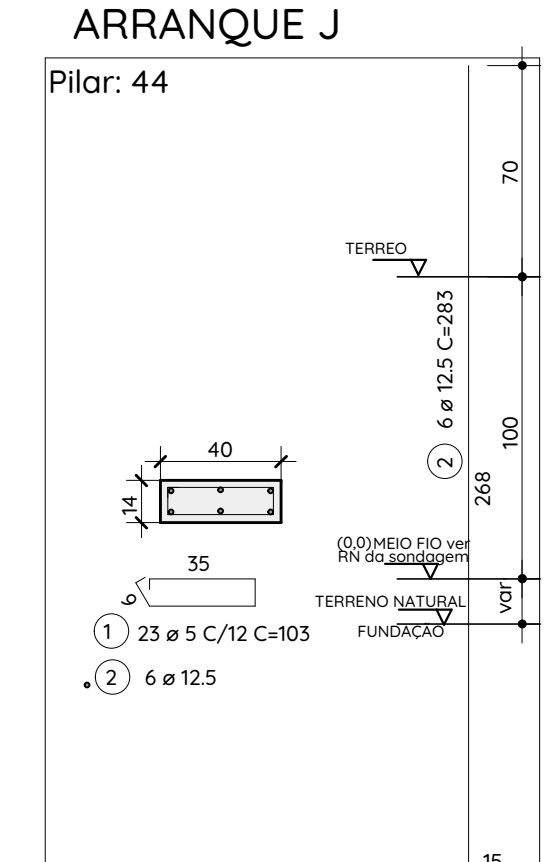
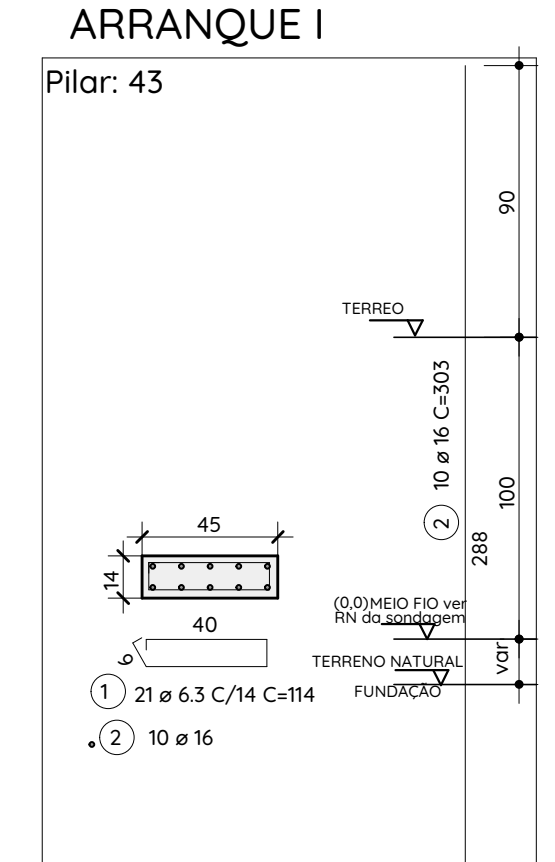
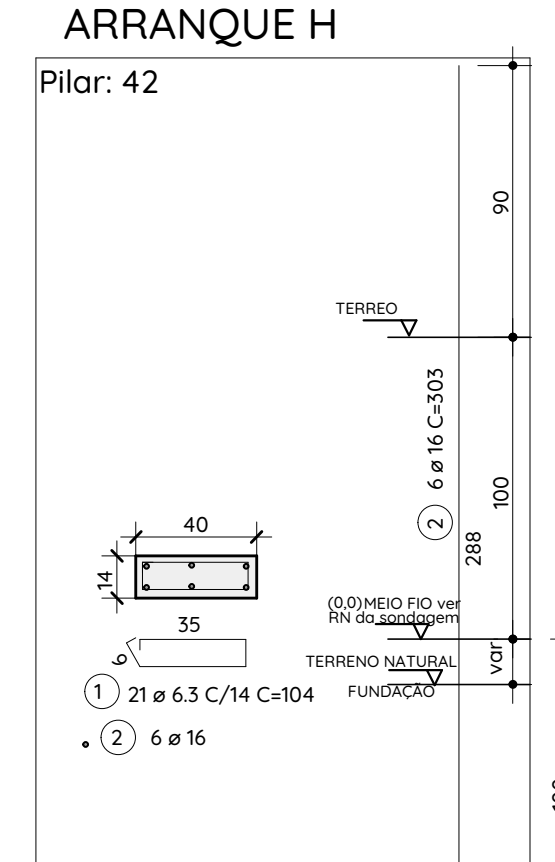
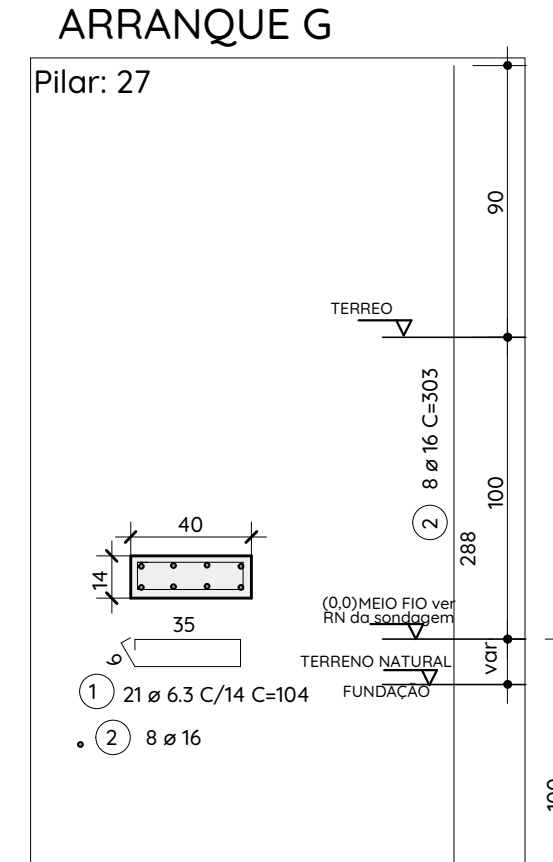
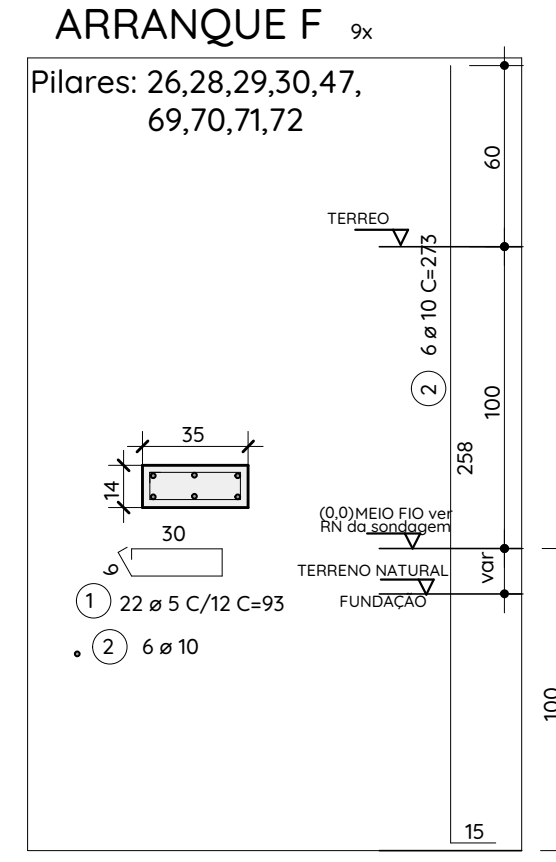
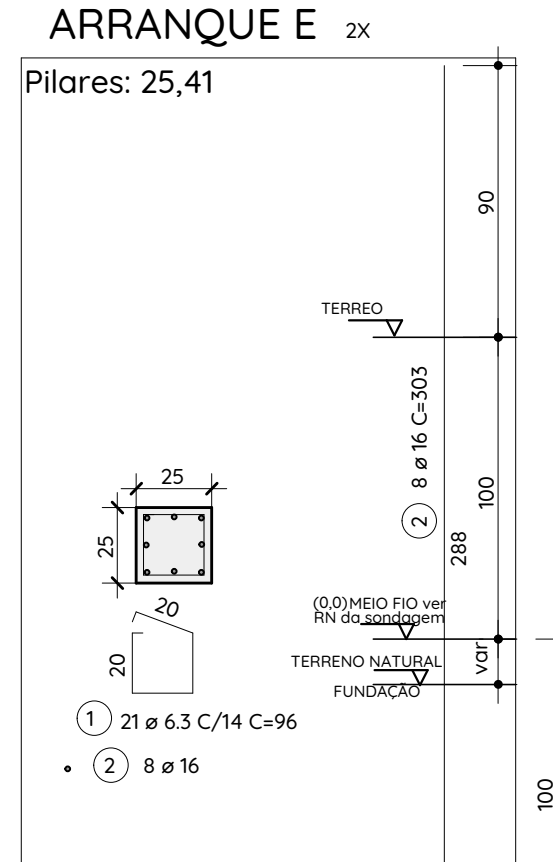
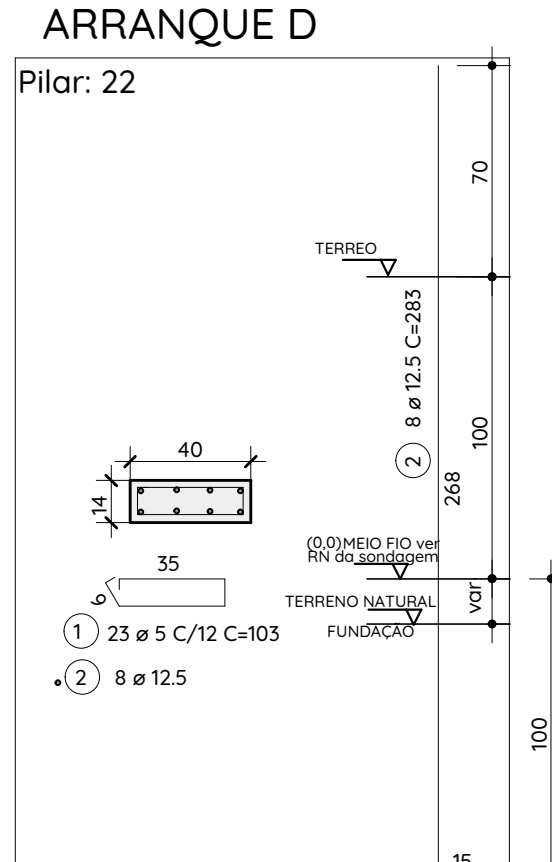
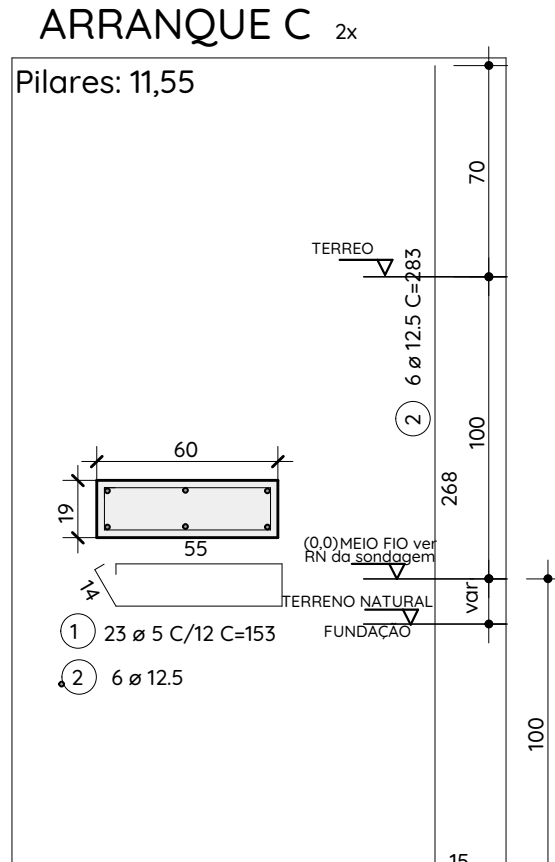
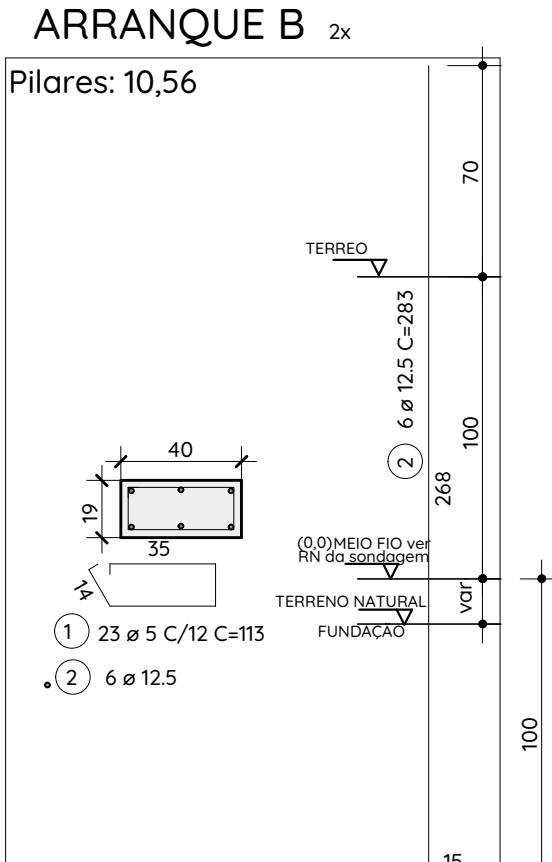
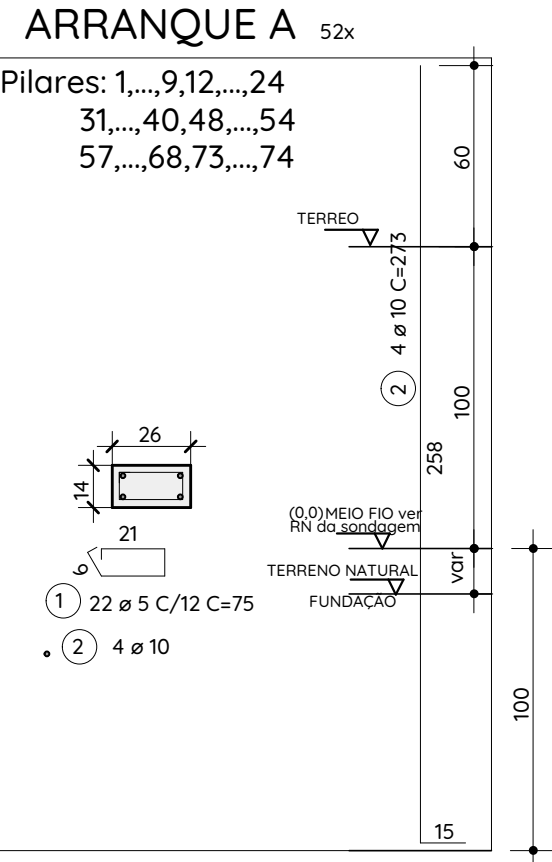
0001

02

REV. N. 0

Indicada

FORMA FUNDAÇÃO



NOTAS GERAIS:

01 - PERIS:

CHAPAS DE ACO ASTM-A36 - fy= 2500kg/cm

TUBO ESTRUTURAL ASTM-A500 - fy= 2500kg/cm

02 - SOLDAS - ELETRODOS E7018

03 - SOLDAR TODAS AS SUPERFICIES EM CONTATO ENTRE OS TUBOS.

SOLDA CONTINUA COM FILETE MÍNIMO DE 3mm, EXCETO ONDE INDICADO.

04 - O DETALHAMENTO, FABRICAÇÃO E MONTAGEM DEVERÃO SEGUIR OS CRITÉRIOS DA NORMA ABNT, NBR - 8800 E COMPLETADA PELA AISC.

05 - VERIFICAR MEDIDAS EM OBRA E ADEQUAR ESTE PROJETO PARA ATENDER AS DIMENSÕES FINAIS, VERIFICANDO INTERFERÊNCIAS COM ESTRUTURAS EXISTENTES.

06 - PINTURA:

0A ESTRUTURA DEVERÁ SER LIMPA ADEQUADAMENTE COM FERRAMENTAS MANUAIS, COMO ESCOVAS, RASPADORES, LIXAS E PALHAS DE ACO.

0A BASE TERÁ DUAS DEMÃOS DE PRIMER ALQUÍDICO COM 40 MICRAS DE ESPESURA POR DEMÃO (PELÍCULA SECA).

0J O ACABAMENTO SERÁ EM DUAS DEMÃOS DE ESMALTE ALQUÍDICO COM ESPESURA DE 40 MICRAS POR DEMÃO.

07 - QUAISQUER MODIFICAÇÕES DEVERÃO SER COMUNICADAS AO PROJETISTA.

08 - MEDIDAS EM MILÍMETROS, EXCETO ONDE INDICADO.

OUFC	ENGENHARIA	DATA	01/05/2023
OBRA	FÓRUM DA COMARCA DE CORURUPE	OBRA N.	0001
TÍTULO	ARMAÇÃO DE SAPATAS E ARRANQUES	03	
PROJETADO	RODRIGO EVARISTO DE OLIVEIRA E SILVA	VERIFICADO	01/05/2023
DESENHADO	F. LIMA	APROVADO	01/05/2023
DESENHO	OP-23-17-EST- 03-R00-FUNDACAO	REVISÃO	00
		ESCALA	Indicada

POS	BIT	QUANT	UNIT	TOTAL
S1-S4=...	S9-S12-S20-S21-S26-S27-S34=	(X28)		
1	6,3	160	160	160
2	8	160	160	160
S2-S14=...	S17-S19-S23-S24-S31-S32=	(X20)		
1	6,3	160	160	160
2	8	160	160	160
S3-S10-S11-S35-S49-S52-S54-S55-S64-S64	(X10)			
1	6,3	160	160	160
2	8	160	160	160
S18-S28-S29-S30-S39-S46	(X6)			
1	6,3	160	160	160
2	8	160	160	160
S22-S44-S45-S50-S70-S71	(X6)			
1	6,3	160	160	160
2	8	160	160	160
S43				
1	8	10	160	1600
2	8	10	160	1600
S25				
1	10	12	195	2340
2	10	12	195	2340
S41				
1	10	15	206	3090
2	10	15	206	3090
BL (X5)				
1	12,5	55	420	14160
2	12,5	45	360	15300
ARRANQUE A (X2)				
1	5	164	75	8560
2	5	206	223	55934
ARRANQUE B (X2)				
1	5	44	151	5784
2	5	12	283	3396
ARRANQUE C (X2)				
1	5	44	151	5784
2	5	12	283	3396
ARRANQUE D				
1	5	25	103	2567
2	5	8	283	2264
ARRANQUE E (X2)				
1	6,3	42	96	4032
2	6,3	8	283	4464
ARRANQUE F (X9)				
1	6,3	21	104	2184
2	6,3	4	303	1191
ARRANQUE H				
1	6,3	21	104	2184
2	6,3	4	303	1191
ARRANQUE J				
1	6,3	21	104	2184
2	6,3	4	303	1191
ARRANQUE K				
1	6,3	21	94	1974
2	6,3	4	303	1191
RESUMO ACO C40-60				
(*) tabela sem perda de aço				
ACO	BIT			
608	131			
608	6,3	784	192	
608	8	264	192	
608	12,5	824	508	
608	15	428	392	
608	16	392	200	
Peso Total	608		200	
Peso Total	608		1417	

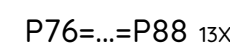
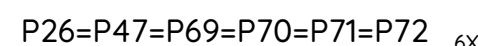
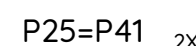
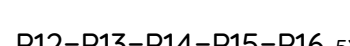
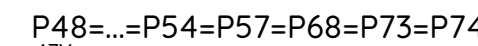


TABELA DE FREQUÊNCIAS						
	POS	QUANT	FREQU	UNIT	TOT	
	POS	QUANT	FREQU	UNIT	TOT	
P1-P9-P17-P22-P23-P24-P25-P26-P27-P28-P29-P30-P31-P32-P33-P34-P35-P36-P37-P38-P39-P40-P41-P42-P43-P44-P45-P46-P47-P48-P49-P50-P51-P52-P53-P54-P55-P56-P57-P58-P59-P60-P61-P62-P63-P64-P65-P66-P67-P68-P69-P70-P71-P72-P73-P74-P75-P76-P77-P78-P79-P80-P81-P82-P83-P84-P85-P86-P87-P88-P89-P90-P91-P92-P93-P94-P95-P96-P97-P98-P99-P100	1	5	105	5	1054	1054
P10-P56	1	5	106	10	1168	1168
	2	5	106	10	1168	1168
	3	5	106	10	1168	1168
P11-P55	1	5	105	10	1160	1160
	2	5	106	10	1161	1161
	3	5	106	10	1161	1161
P12-P13-P14-P15-P16-P17-P18-P19-P20-P21-P22-P23-P24-P25-P26-P27-P28-P29-P30-P31-P32-P33-P34-P35-P36-P37-P38-P39-P40-P41-P42-P43-P44-P45-P46-P47-P48-P49-P50-P51-P52-P53-P54-P55-P56-P57-P58-P59-P60-P61-P62-P63-P64-P65-P66-P67-P68-P69-P70-P71-P72-P73-P74-P75-P76-P77-P78-P79-P80-P81-P82-P83-P84-P85-P86-P87-P88-P89-P90-P91-P92-P93-P94-P95-P96-P97-P98-P99-P100	1	5	105	10	1160	1160
	2	5	106	10	1161	1161
	3	5	106	10	1161	1161
P22	1	5	105	10	1160	1160
	2	5	106	10	1161	1161
	3	5	106	10	1161	1161
P25-P41	1	5	105	6	1110	1110
	2	5	106	6	1116	1116
	3	5	106	6	1116	1116
P26-P47-P48-P49-P50-P51-P52-P53-P54-P55-P56-P57-P58-P59-P60-P61-P62-P63-P64-P65-P66-P67-P68-P69-P70-P71-P72-P73-P74-P75-P76-P77-P78-P79-P80-P81-P82-P83-P84-P85-P86-P87-P88-P89-P90-P91-P92-P93-P94-P95-P96-P97-P98-P99-P100	1	5	105	5	1105	1105
	2	5	106	5	1110	1110
	3	5	106	5	1110	1110
P27	1	5	105	24	1344	1344
	2	5	106	24	1344	1344
	3	5	106	24	1344	1344
P28-P39-P50	1	5	105	18	1254	1254
	2	5	106	18	1260	1260
	3	5	106	18	1260	1260
P42	1	5	105	103	1038	1038
	2	5	106	104	1044	1044
	3	5	106	104	1044	1044
	4	5	106	104	1044	1044
	5	5	106	104	1044	1044
P43	1	5	105	4	1104	1104
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	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P44	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P45	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P46	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P47	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P48	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P49	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P50	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P51	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P52	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P53	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P54	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P55	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P56	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P57	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P58	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P59	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P60	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P61	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P62	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P63	1	5	105	4	1104	1104
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	3	5	106	4	1104	1104
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	5	5	106	4	1104	1104
P64	1	5	105	4	1104	1104
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	3	5	106	4	1104	1104
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P65	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P66	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P67	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P68	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P69	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P70	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
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	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P71	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P72	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P73	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P74	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P75	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P76	1	5	105	4	1104	1104
	2	5	106	4	1104	1104
	3	5	106	4	1104	1104
	4	5	106	4	1104	1104
	5	5	106	4	1104	1104
P77-P78-P83	1	5	105	10	1160	1160
	2	5	106	10	1161	1161
	3	5	106	10	1161	1161
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	5	5	106	10	1161	1161
	6	5	106	10	1161	1161
	7	5	106	10	1161	1161
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	15	5	106	10	1161	1161
	16	5	106	10	1161	1161
	17	5	106	10	1161	1161
	18	5	106	10	1161	1161
	19	5	106	10	1161	1161
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